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MISSOURI RIVER ENVIRONMENTAL INVENTORY VERTEBRATE  
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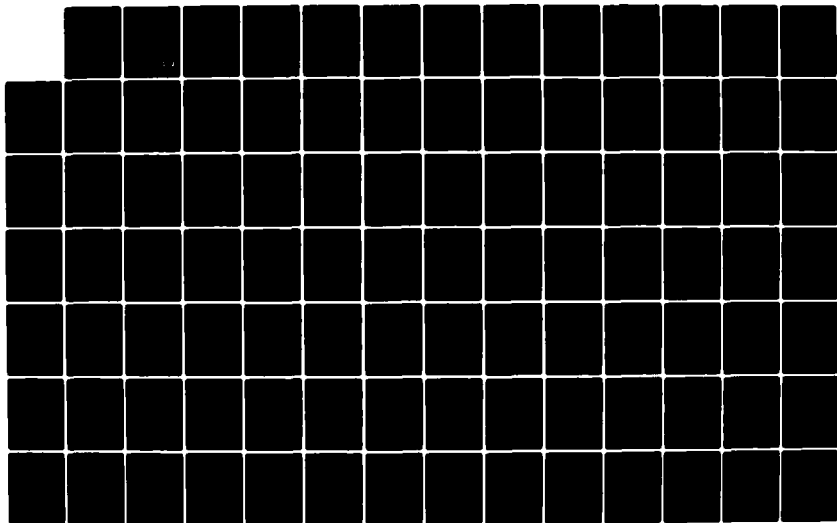
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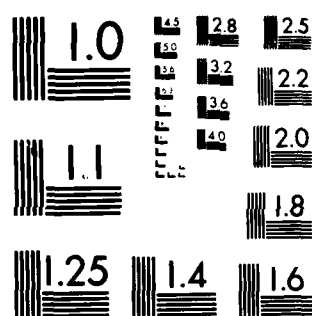
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FINAL REPORT  
MISSOURI RIVER ENVIRONMENTAL INVENTORY  
**1973**

VERTEBRATE SECTION  
BIRDS

by  
JAMES LYNK  
under the direction of  
DR. BYRON HARRELL

BIRDS ALONG THE MISSOURI RIVER FROM GAVIN'S POINT DAM TO  
RULO, NEBRASKA WITH SPECIAL REFERENCE TO THE EFFECTS OF  
CHANNELIZATION ON BREEDING BIRDS.

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## A. GAVIIFORMES

## 1. Gaviidae

1. Common Loon, Gavia immer, Spr., Fall migr.  
 Spring - last of March to Union Co. - uncommon  
 Migr. end of April De Soto NWR - occasional  
 Fall - Sept & Oct. Sq. C. NWR - rare  
 Migr.

## B. PODICIPEDIFORMES

## 1. Podicipedidae

2. Red-necked Grebe, Podiceps grisegena, (formerly Holboell's Grebe)  
 Spr., Fall migr.  
 Spr. migr. - early March  
 Fall migr. - mid-October
3. Horned Grebe, Podiceps auritus, Spr., Fall migr.  
 Spring - April 19 De Soto NWR - rare  
 Fall - last seen Nov. 11 Sq. C. NWR - occasional  
 A 5/11 1
4. Eared Grebe, Podiceps caspicus, breeds in N., Spr., Fall migr. in S.  
 Spring - end of April De Soto NWR - rare  
 Fall - Sept. 22 to Nov. 2 Sq. C. NWR - occasional  
 Egg dates - April 29 to July 23  
 Bent - Breeds in densely populated colonies in shallow, marshy  
 lakes, in open situations.
5. Western Grebe, Aechmophorus occidentalis, Spr., Fall migr.  
 Spring - early May Union Co. - casual spring visitor  
 Fall - October De Soto NWR - rare  
 Yankton, S.D. 27/10 1
6. Pied-billed Grebe, Podilymbus podiceps, breeds throughout; winters south  
 of ice.  
 Spring - March to mid-April Union Co. - tolerably common  
 Fall - Starting southward in De Soto NWR - uncommon  
 Sept. Sq. C. NWR - common  
 Bent - Nest, in small, scattered colonies, nests well-hidden, on  
 small mounds just above the waterline, or floating if in  
 deep water.

G 6/9 5  
 G 8/9 9  
 G 11/9 30  
 M 17/9 11  
 F 17/9 24

## C. PELECANIFORMES

## 1. Pelecanidae

7. White Pelican, Pelecanus erythrorhynchos, Spr., Fall migr.  
 Spr. Ar. - March 18 Union Co. - regular  
 Fall Ar. - Sept. 13 De Soto NWR - uncommon  
 Sq. C. NWR - abundant  
 W 4/10 28

## 2. Phalacrocoracidae

8. Double-crested Cormorant, Phalacrocorax auritus, Breeds near northern part of area; Spr., Fall migr. elsewhere.

Spr. Ar. - March 1-7	Union Co. - tolerably common
Spr. Dep - May 22	De Soto NWR - common
Fall Ar. - Oct. 5	Sq. C. NWR - common
Fall Dep - Nov. 20	

Bent - Known to breed at Stump Neck, N.D. Used to rest in trees with great Blue Herons in colonies.

	W 15/9	4
Yankton, S.D.	27/9	3
Elk Point, S.D.	27/9	1
Yankton, S.D.	11/10	70
Elk Is., S.D.	11/10	4
	(W 23/10	7)
Yankton, S.D.	25/10	55
Burbank L., S.D.	10/5	2

## D. CICONIIFORMES

### 1. Ardeidae

9. Great Blue Heron, Ardea herodias, winter resident to S.; Breeds throughout.

Spr. Ar. - late March	Union Co. - common and regular
Fall Dep - early October	
Egg dates - April 19 to May 9	

Bent - Group nesting in low trees in isolated area.

	W 14/9	1
Yankton, S.D.	27/9	7
Elk Is., S.D.	27/9	7
	W 27/9	7
	A 27/9	7
Elk Pt., S.D.	27/9	10
Yankton, S.D.	11/10	21
Elk Is., S.D.	11/10	9
	W 11/10	4
Elk Is., S.D.	25/10	6
Browns L., Ia.	15/6	20
Sq. C. NWR	24/5	1
Sq. C. NWR	26/5	3

10. Green Heron, Butorides virescens, common breeder throughout.

Spr. Ar. - late April	Union Co. - tolerably common
Fall Dep. - Sept. 24	De Soto NWR - uncommon
Egg Dates - May 12 to June 18	Sq. C. NWR - common

Bent - nests singly or in colonies, in woods or marshes. Tame.

11. Little Blue Heron, Florida caerulea, occ. extends after breeding season through area; breeds S. of area.  
     In South of area in June                      Sq. C. NWR - common  
     and Aug.  
     Egg Dates - April 17 to May 16  
     Bent - Nests on willow islands in rivers.  
     Sq. C. NWR    24/5 1
12. Cattle Egret, Bubulcus ibis, occ. extends summer range to area.
13. Common Egret, Casmerodius albus, breeds throughout.  
     Spr. arr. - May 2                      Union Co. - casual late summer visitor  
     Egg Dates - April 4 to May 20      De Soto NWR - occasional  
     Sq. C. NWR - common  
     Bent - nests in willow swamps  
     Sq. C. NWR    24/5 1
14. Snowy Egret, Leucophoyx thula, occ. extends (after breeding season) summer range to area, breeds south of area  
     Egg Dates - April 29 to June 12      Sq. C. NWR - occasional
15. Black-crowned Night Heron, Nycticorax nycticorax, breeds throughout.  
     Spr. arr. - April 17                      Union Co. - regular  
     Fall dep. - Nov. 20                      De Soto NWR - rare  
     Egg Dates - April 10 to June 12      Sq. C. NWR - common  
     Bent - Nest in colonies; 3-5 nests per tree, in dry scrub-oak woods; a few nest in marshes.  
     Burbank L.                                      10/6 3  
     Sq. C. NWR                                      24-5 1  
     Sq. C. NWR                                      25/4 3
16. Yellow-crowned Night Heron, Nyctanassa violacea, occ. extends after breeding season to area, breeds to south.  
     Egg Dates - April 13 to May 23      Sq. C. NWR - occasional
17. Least Bittern, Ixobrychus exilis, breeds throughout.  
     Spr. arr. - May 11                      Union Co. - uncommon  
     Fall dep. - Oct. 8                      Sq. C. NWR - occasional  
     Egg Dates - May 22 to July 10  
     Bent - Nests deep within marshes, in Typha or Sagittaria.
18. American Bittern, Botaurus lentiginosus, breeds throughout.  
     Spr. arr. - March 21                      Union Co. - common  
     Fall dep. - Nov. 10                      De Soto NWR - occasional  
     Egg Dates - June 5 to July 21      Sq. C. NWR - uncommon  
     Bent - solitary; Nests in Typha + Scurpus  
     Burbank L.                                      10/6 1
19. White-faced Ibis, Flegadis chihi, fall migr.  
     Fall arr. - early October              Sq. C. NWR - rare

## E. ANSERIFORMES

## 1. Anatidae

20. Whistling Swan Olor columbianus, Spr., Fall migr.  
 Spr. arr. - March 31 Union Co. - rare  
 Fall arr. - Late October De Soto NWR - rare  
 Sq. C. NWR - rare
21. Canada Goose, Branta canadensis, Spr., Fall migr.  
 Spr. arr. - Feb. 4 Union Co. - regular  
 Fall arr. - Sept. 7 De Soto NWR - abundant  
 Sq. C. NWR - abundant
- Vermillion, S.D. 27/9 flock of Snows with  
 1 Canada  
 Vermillion, S.D. 1/10 flock Leord 2232 & 2330  
 (medium size)  
 Vermillion, S.D. 3/10 large flock Leord  
 : W 4/10 1  
 M 8/10  
 W 16/10 1  
 A 2/11 6  
 Blair 24/11 5  
 Neb. City 24/11 30  
 A 30/11 3  
 Vermillion, S.D. 3/5 25
22. Brant, Branta bernicla  
 Spr. arr. - Feb. 15 De Soto NWR - rare  
 Fall arr. - Sept. 8
23. White-fronted Goose, Anser albifrons, Spr., Fall migr.  
 Spr. migr. - late April to Union Co. - usually not common  
 early May De Soto NWR - common  
 Fall migr. - late Sept. to Sq. C. NWR - common  
 early Oct.
24. Snow Goose, Chen hyperborea, Spr., Fall migr.  
 Spring arr. - March 28 Union Co. - abundant in spring,  
 less so in fall  
 De Soto NWR - abundant  
 Sq. C. NWR - abundant
- Vermillion, S.D. 27/9 flock of 14 Snows  
 (including 1 Canada)  
 M 8/10 8  
 M 10/10 1  
 M 11/10 7  
 W 13/10 4  
 M 14/10 6  
 Burbank L., S.D. 4/11 6 flights of Snow Geese,  
 at 100 each, total 650,  
 NE to SW, medium low.



	A 5/11	40
Vermillion, S.D.	12/11	50
Yankton, S.D.	24/11	2
Sioux City	24/11	1200
Blair, Neb.	24/11	1300
Neb. City	24/11	1500
	W 29/11	35
Sq. C. NWR	24/5	2
Sq. C. NWR	25/5	2

25. Ross' Goose, Chen rossii, normally western. Rare visitant.  
 Spring - early April De Soto NWR - rare  
 Fall - late Oct.

26. Mallard, Anas platyrhynchos, summer resid. in N., year round in central, winter resid. in South

Spring arr. - Feb. 24 Union Co. - common or abundant  
 Fall arr. - Nov. 15 De Soto NWR - abundant  
 Egg Dates - April 29 to July 6 Sq. C. NWR - abundant  
 Bent - Nests on ground in almost dry edge of a marsh.

	G 2/9	1
	W 22/9	1
	M 11/10	4
	M 14/10	2
	M 15/10	50
	W 16/10	1
	W 23/10	7
Yankton, S.D.	25/10	12
	W 25/10	2
Elk Is., S.D.	25/10	3
	G 26/10	20
	A 2/11	46
	A 3/11	15
	A 5/11	48
Yankton, S.D.	24/11	26
Sioux City	24/11	150
Blair	24/11	235
Neb. City	24/11	400
Rulo	24/11	200
	W 29/11	15
	A 30/11	4
Omaha	Xmas	451
Yankton, S.D.	Xmas	170
Sioux City	Xmas	50
	G 26/3	21
	M 10/4	2
Burbank L., S.D.	10/6	2
Sq. C. NWR	23/5	5
Sq. C. NWR	24/5	2
Sq. C. NWR	25/5	92
Burbank L., S.D.	1/6	2

27. Black duck, Anas rubripes, Spr., Fall migr.  
 Spr. migr. - late April to mid March Union Co. - uncommon to rare  
 De Soto NWR - common  
 Fall migr. - Mid Nov. Sq. C. NWR - common  
 Yankton, S.D. Xmas 2
28. Gadwall, Anas strepera, Spr., Fall migr.  
 Spr. arr. - March 10 Union Co. - regular and tolerably common  
 De Soto NWR - common  
 Sq. C. NWR - common  
 M 10/10 1  
 W 13/10 3  
 M 14/10 3  
 A 16/10 28  
 M 20/10 21  
 W 25/10 2  
 G 5/11 63  
 Yankton, S.D. 21/3 5  
 Sq. C. NWR 25/5 1
29. Pintail, Anas acuta, breeds throughout  
 Spr. arr. - Feb. 18 Union Co. - abundant migrant  
 Egg Dates - May 11 to June 27 De Soto NWR - abundant  
 Sq. C. NWR - abundant  
 Bent - nest in low grass near edge of pond or slough.  
 F 17/9 2  
 A 16/10 3  
 Yankton, S.D. 25/10 6  
 G 26/3 48  
 M 10/4 9  
 Sq. C. NWR 23/5 3  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 1
30. Green-winged Teal, Anas carolinensis, breeds in N.; Spr.,  
 Fall migr. elsewhere.  
 Spring arr. - March 20 Union Co. - regular migrant  
 Fall arr. - Nov. 27 De Soto NWR - common  
 Sq. C. NWR - common  
 Bent - nest in a hollow in dry ground a considerable distance from the lake or slough (early nester).  
 G 2/9 10  
 M 10/10 1  
 M 10/4 2  
 M 18/4 2
31. Blue-winged Teal, Anas discors, breeds throughout.  
 Spring arr. - March 18 Union Co. - common  
 Fall dep. - Nov. 4 De Soto NWR - abundant  
 Egg Dates - May 8 to July 23 Sq. C. NWR - common  
 Bent - nest in dry grass near ponds or sloughs (late nesters).

	G 2/9	15
	G 6/9	19
	G 8/9	45
	G 11/9	100
	W 15/9	20
	M 17/9	3
	F 17/9	8
	W 27/9	3
Elk Is., S.D.	27/9	3
	M 9/10	2
	W 13/10	5
	A 2/11	69
	M 18/4	1
Burbank L., S.D.	10/6	12
Browns L., Ia.	15/6	4
Sq. C. NWR	23/5	6
Sq. C. NWR	24/5	2
Sq. C. NWR	25/5	1
Burbank L., S.D.	1/6	6

32. Cinnamon Teal, Anas cyanoptera, Spr., Fall migr. to S.  
 Spr. arr. - April 10 Union Co. - casual  
 Fall migr. - Sept. to Mid Oct. Sq. C. NWR - rare
33. European Widgeon, Mareca penelope, rare, Fall migr.  
 Bent - Interior U.S. records mostly in Spring--March,  
 April
34. American Widgeon, Mareca americana, Spr., Fall migr.  
 Spring arr. - March 15 Union Co. - common in Spr., seems  
 Fall dep. - Nov. 18 less common in Fall  
 De Soto NWR - abundant  
 Sq. C. NWR - common  
 M 17/9 8  
 F 17/9 11  
 M 11/10 2  
 M 14/10 1  
 M 15/10 15  
 M 20/10 3  
 Yankton, S.D. 21/3 2  
 G 26/3 13  
 M 10/4 104  
 M 18/4 150  
 Burbank L., S.D. 1/6 2
35. Shoveler, Spatula clypeata, breeds in N.; Spr., Fall migr.  
 elsewhere.  
 Spr. arr. - March 23 Union Co. - tolerably common  
 Egg Dates - May 9 to July 3 migrant  
 De Soto NWR - common  
 Sq. C. NWR - common

Bent - nests in dry grass near ponds or sloughs (late nester).

	G 2/9	2
	G 6/9	8
	G 8/9	8
	G 11/9	30
	M 9/10	4
	M 11/10	8
	M 17/10	3
Yankton, S.D.	25/10	4
	G 26/3	9
	M 10/4	109
	M 18/4	20
Sq. C. NWR	24/5	1
Sq. C. NWR	25/5	1

36. Wood Duck, Aix sponsa, breeds throughout.

Spring arr. - March 7 De Soto NWR - common

Fall dep. - Nov. 9 Sq. C. NWR - common

Egg Dates - April 17 to June 4

Bent - Always nest in hollows in trees, natural or old flicker or squirrel hole. Not necessarily near water.

	G 2/9	2
	W 7/10	1
Browns L., Ia.	15/6	4

37. Redhead, Aythya americana, breeds in N.; Spr., Fall migr. elsewhere.

Spring arr. - March 8 Union Co. - rather uncommon  
Fall arr. - Oct. 6 spring migrant

Egg Dates - May 18 to June 28 De Soto NWR - occasional

Sq. C. NWR - occasional

M 17/9 5

F 17/9 3

M 15/10 3

G 26/3 41

M 29/3 20

Sq. C. NWR 24/5 1

Sq. C. NWR 25/5 2

38. Ring-necked Duck, Aythya collaris, Spr., Fall migr.

Spr. arr. - March 14 Union Co. - in small numbers

Fall arr. - Nov. 22 De Soto NWR - common

Sq. C. NWR - occasional

A 16/10 1

A 3/11 12

G 26/3 31

M 29/3 60

M 10/4 92

39. Canvasback, Aythya valisineria, Spr., Fall migr.  
 Spring arr. - March 12 Union Co. - in small numbers  
 Fall dep. - Nov. 27 De Soto NWR - occasional  
 Sq. C. NWR - uncommon  
 M 11/10 1  
 W 13/10 25  
 W 16/10 6  
 G 26/3 3  
 M 29/3 20  
 M 10/4 14  
 Sq. C. NWR 24/5 1
40. Greater Scaup, Aythya marila, Spr., Fall migr.  
 Spr. arr. - March 6 De Soto NWR - rare  
 Fall arr. - Nov. 27 Sq. C. NWR - rare
41. Lesser Scaup, Aythya affinis, Spr., Fall migr.  
 Spring arr. - Feb. 21 Union Co. - abundant Spring  
 Fall dep. - Dec. 2 migrant, present in  
 small numbers in the  
 Fall  
 De Soto NWR - common  
 Sq. C. NWR - common  
 M 20/10 6  
 A 3/11 40  
 M 10/4 95  
 M 18/4 41
42. Common Goldeneye, Bucephala clangula, winter resident.  
 Spring arr. - March 14 Union Co. - Spr., Fall migrant  
 Fall arr. - Nov. 24 in limited numbers  
 De Soto NWR - uncommon  
 Sq. C. NWR - uncommon  
 A 16/10 7  
 Yankton, S.D. Xmas 1
43. Bufflehead, Bucephala albeola, Spr., Fall migr. in N., winter  
 resid. in S.  
 Spring arr. (avg.) - March 15 Union Co. - small numbers  
 De Soto NWR - common  
 Sq. C. NWR - uncommon  
 M 15/10 3  
 A 3/11 7  
 M 18/4 1
44. Old Squaw, Clangula hyemalis, occasionally in winter in study  
 area; normally Great Lakes.  
 Union Co. - rare late Fall visitor  
 De Soto NWR - rare

45. White-winged Scoter, Melanitta deglandi, Spr., Fall migr.  
normally Great Lakes  
Spring arr. - April 5                      Union Co. - casual Fall visitor  
Fall dep. - Oct. 11                      De Soto NWR - rare  
   Sq. C. NWR - rare
46. Ruddy Duck, Oxyura jamaicensis, breeds N.; Spr., Fall migr.  
elsewhere.  
Spr. arr. - April 7                      Union Co. - regular migrant in  
Egg Dates - June 8 to July 19                      small numbers  
   De Soto NWR - occasional  
   Sq. C. NWR - occasional  
Bent - nests in deep-water sloughs amongst tall bulrushes,  
in knee deep water  
Elk Is., S.D.                      25/10 4  
   G 26/3 4
47. Hooded Merganser, Lophodytes cucullatus, breeds throughout-  
Spr. arr. - March 5                      Union Co. - regular Spr., Fall  
Fall dep. - Nov. 26                      migration  
Egg Dates - June 5 to June 13                      De Soto NWR - uncommon  
   Sq. C. NWR - uncommon  
Bent - nest in natural cavities at any height in heavily  
wooded bottoms or flooded woodlands (assoc. with  
Wood Duck).
48. Common Merganser, Mergus merganser, winter resident.  
Spring arr. (avg.) - March 28                      Union Co. - tolerably common  
   De Soto NWR - common  
   Sq. C. NWR - uncommon  
   A 16/10 8  
Omaha                      Xmas 3  
Yankton, S.D.                      Xmas 1  
Sioux City                      Xmas 4  
   M 29/3 20
49. Red-breasted Merganser, Mergus serrator, Spr., Fall migr.  
Spring dep. - May 4                      Sq. C. NWR - occasional  
   M 29/3 4

## F. FALCONIFORMES

### 1. Cathartidae

50. Turkey Vulture, Cathartes aura, breeds throughout  
Spr. arr. - Feb. 7                      Union Co. - uncommon  
Fall dep. - Nov. 7                      De Soto NWR - uncommon  
Egg Dates - April 16 to June 13                      Sq. C. NWR - common  
Bent - Wherever a protected place can be found--on  
precipitous cliffs, in caves, on top of tall  
dead stumps, eggs are laid without a nest. They  
spend the night in a communal roost when not  
nesting.

## 2. Accipitridae

51. Goshawk, Accipiter gentilis, winters.

winters October through March	Union Co.	- casual
	De Soto NWR	- rare
	Sq. C. NWR	- rare
Yankton, S.D.	11/10	1
Omaha	Xmas	1
St. Joseph	Xmas	1
Yankton, S.D.	Xmas	2

52. Sharp-shinned Hawk, Accipiter striatus, breeds in N., year-round elsewhere.

Spr. migr. - March-April	Union Co.	- tolerably common
Fall migr. - follows sparrows		migrant
and warblers south	De Soto NWR	- occasional
Aug. - Sept.	Sq. C. NWR	- uncommon
Egg Dates - April 11 to June 22		
Bent - Nests atop evergreens in dense groups, near open country.		
	W 15/9	1
Omaha	Xmas	1

53. Cooper's Hawk, Accipiter cooperii, breeds in N., year-round elsewhere.

Spr. migr. - March-April	Union Co.	- uncommon
Fall migr. - early Oct.	De Soto NWR	- uncommon
Egg Dates - Apr. 26 to June 21	Sq. C. NWR	- occasional
Bent - Nests on top of Pine trees, oaks, or chestnuts.		
often migrates with Sharp-shinned		
Omaha	Xmas	2
	A 18/5	1

54. Red-tailed Hawk, Buteo jamaicensis, year-round.

Egg Dates - March 6 to June 30	Union Co.	- regular
	De Soto NWR	- common
	Sq. C. NWR	- common
Bent - Nest often in the same place, in white pines or oaks. Prefers more open country.		
	W 22/9	1
	W 27/9	1
Elk Is., S.D.	27/9	1
Omaha	Xmas	19
St. Joseph	Xmas	18
Yankton, S.D.	Xmas	1
Sioux City	Xmas	6
Yankton, S.D.	21/3	1
	A 17/3	1

55. Harlan's Hawk, Buteo harlani, Spr., Fall migr.

Spr. migr. - throughout April	Sq. C. NWR	- uncommon
Fall migr. - Sept. 28 to Nov. 20		

56. Red-shouldered Hawk, Buteo lineatus, breeds in N., year-round elsewhere.  
 Spr. arr. - March 16                      De Soto NWR - occasional  
 Fall dep. - Nov. 14                      Sq. C. NWR - occasional  
 Egg Dates - March 13 to June 21  
 Bent - Prefers scattered woodlands, hardwoods. Loyal to a certain nesting territory; nests in the main fork of a large tree.
57. Broad-winged Hawk, Buteo platypterus, breeds throughout.  
 Spr. arr. - March 27                      Union Co. - uncommon  
 Fall dep. - Oct. 13                      Sq. C. NWR - uncommon  
 Egg Dates - May 15 to June 27  
 Bent - Prefer deep dense and extensive forests, usually hardwood, far from civilization. Nest mainly in oak or white pine at moderate height.
58. Swainson's Hawk, Buteo swainsoni, breeds throughout.  
 Spr. arr. - April 4                      Sq. C. NWR - occasional  
 Fall dep. - Oct. 12  
 Egg Dates - May 10 to July 14  
 Bent - In open spaces (prairies and plains) nest in timber belts near small streams often in cottonwood and willows, often in small trees; mostly 20 ft. above ground.
59. Rough-legged Hawk, Buteo lagopus, winters throughout.  
 Fall arr. - Sept. 9                      Union Co. - regular  
 Spr. dep. - March 17                      De Soto NWR - occasional  
    Sq. C. NWR - common  
    Omaha                      Xmas 3  
    Yankton, S.D.                      Xmas 1
60. Golden Eagle, Aquila chrysaetos, winter resid.  
 southward movement during                      Union Co. - casual  
 winter is caused by food                      De Soto NWR - rare  
 availability and not a migration with regular dates.                      Sq. C. NWR - rare
61. Bald Eagle, Haliaeetus leucocephalus, winter resident.  
    Union Co. - casual  
    De Soto NWR - abundant  
    Sq. C. NWR - common  
    Near Offit AFB                      24/11 1  
                                         W 29/11 2  
                                         W 3/12 2  
    Omaha                      Xmas 1  
    Yankton, S.D.                      Xmas 1  
    Sioux City                      Xmas 16



62. Marsh Hawk, Circus cyaneus, year-round resident throughout.  
Egg Dates - April 6 to June 30 Union Co. - common  
De Soto NWR - uncommon  
Sq. C. NWR - common  
Bent - Prefers sloughs and wet meadows, but often found  
in upland prairies and grassy meadows, nests  
usually in the swamps above water or at the edge;  
sometimes on dry land near grassy meadows.  
W 25/10 1  
Omaha Xmas 2  
Yankton. S.D. Xmas 1

### 3. Pandionidae

63. Osprey, Pandion haliaetus, Spr., Fall migr.  
Spr. arr. - March 19 Union Co. - regular  
Fall dep. - Nov. 12 De Soto NWR - uncommon  
Sq. C. NWR - uncommon

## 4. Falconidae

64. Prairie Falcon, Falco mexicanus, casual winter, normally western.
- Union Co. - casual  
Sq. C. NWR - rare
65. Peregrine Falcon, Falco peregrinus, Spr., Fall migr.
- Union Co. - casual  
De Soto NWR - rare  
Sq. C. NWR - occasional
66. Pigeon Hawk, Falco columbarius, Spr., Fall migr.
- Union Co. - casual  
Sq. C. NWR - rare
67. Sparrow Hawk, Falco sparverius, breeds in N. sometimes in winter, year-round resid. elsewhere.
- Union Co. - abundant migrant, occasional breeder  
De Soto NWR - occasional  
Sq. C. NWR - uncommon
- Omaha Xmas 17  
St. Joseph Xmas 9  
Sioux City Xmas 3

## G. GALLIFORMES

## 2. Tetraonidae

68. Ruffed Grouse, Bonasa umbellus, formerly year-round in S.

Egg Dates - April 28 to June 4

Bent - on ground in thick deciduous woods

69. Greater Prairie Chicken, Tympanuchus cupido, formerly year-round throughout.

Egg Dates - April 20 to June 6 Union Co. - two seen 1950

Bent - nests on ground.

### 3. Phasianidae

70. Bobwhite, Colinus virginianus, year-round throughout

Egg Dates - April 28 to Oct. 16 Union Co. - small numbers

De Soto NWR - abundant

Sq. C. NWR - common

Bent- nest along fence-rows, in brushy field corners, brush piles, wood edges.

Omaha	Xmas	23
St. Joseph	Xmas	28
Sioux City	Xmas	9
	A 5/4	2
Sq. C. NWR	23/5	4
Sq. C. NWR	25/5	1
Burbank L., S.D.	1/6	4

71. Ring-necked Pheasant, Phasianus colchicus, year-round throughout. Introduced.

Egg Date - April 17

Union Co. - common

De Soto NWR - abundant

Sq. C. NWR - common

Bent - nests on ground in open fields and pastures.

Omaha	Xmas	36
Sioux City	Xmas	12
	A 5/4	1
	A.5/5	2
Browns L., Ia.	15/6	2
Sq. C. NWR	24/5	3
Sq. C. NWR	25/5	3

### 4. Meleagrididae

72. Turkey, Meleagris gallapavo, formerly throughout.

Egg Dates - April 3 to June 2

Bent - near oaks, wild pecans, and other nut-bearing trees.

Union Co. 21/5 1

## H. GRUIFORMES

### 1. Gruidae

73. Whooping Crane, Grus americana, formerly Spr., Fall migr. normally to west

Spr. arr. - March 18

Fall dep. - Nov. 12

74. Sandhill Crane, Grus canadensis, Spr., Fall migr.  
 Spr. arr. - March 31 Union Co. - uncommon  
 Fall dep. - Oct. 27 De.Soto NWR - rare  
 Sq. C. NWR - rare

## 2. Rallidae

75. King Rail, Rallus elegans, sum. res.  
 Spr. arr. - April 10 Union Co. - regular breeder  
 Fall dep. - Sept. 22 Sq. C. NWR - occasional  
 Egg Dates - May 21 to June 30  
 Bent - in or near marshes surrounded by wooded land, nest is built up a foot above water
76. Virginia Rail, Rallus limicola, breeds throughout.  
 Spr. arr. - April 22 Union Co. - tolerably common  
 Fall dep. - Oct. 17 De Soto NWR - rare  
 Egg Dates - May 21 to June 24 Sq. C. NWR - uncommon  
 Bent - in a marsh but drier than habitat preferred by Sora. Nests rests on mud.
77. Sora, Porzana carolina, breeds throughout.  
 Spr. arr. - April 22 Union Co. - common  
 Fall dep. - Oct. 17 De Soto NWR - occasional  
 Egg Dates - May 16 to June 28 Sq. C. NWR - common  
 Bent - Nest in deep water of typha marshes, nest suspended from the cattails.  
 A 5/5 1
78. Yellow Rail, Coturnicops noveboracensis, Spr., Fall migr.  
 Spr. arr. - April 22 Sq. C. NWR - rare  
 Fall dep. - Sept. 24
79. Black Rail, Laterallus jamaicensis, sum. res. in S.  
 Spr. arr. - late March to early April  
 Fall dep. - Oct. 11  
 Egg Dates - late May to Mid Aug.  
 Bent - Nests in short grass near edge of marsh (but dry).
80. Common Gallinule, Gallinula chloropus, sum. res.  
 Spr. arr. - April 18 Union Co. - casual migrant, a few breed  
 Fall dep. - Oct. 17  
 Egg Dates - May 20 to July 4 Sq. C. NWR - rare  
 Bent - In bushes or on sunken logs in ponds.
81. American Coot, Fulica americana, breeds throughout  
 Spr. arr. - March 11 Union Co. - common  
 Fall dep. - Nov. 18 De Soto NWR - common  
 Egg Dates - May 10 to July 6 Sq. C. NWR - abundant



	W 13/10	11
	M 14/10	3
	M 15/10	3
	G 18/10	23
	W 23/10	1
	G 26/10	6
	G 1/11	5
	G 5/11	7
Omaha	Xmas	1
Yankton, S.D.	21/3	2
Sq. C. NWR	24/5	1
Sq. C. NWR	25/5	1
De Soto NWR	26/5	1

85. American Golden Plover, Pluvialis dominica, Spr., Fall migr. throughout.

Spr. arr. - April 8	Sq. C. NWR - occasional
Spr. dep. - May 23	
Fall arr. - Aug. 3	
Fall dep. - Nov. 14	

86. Black-bellied Plover, Squatarola squatarola, common Spr., Fall migr. throughout.

Spr. arr. - May 3	Union Co. - uncommon
Spr. dep. - May 24	Sq. C. NWR - common
Fall arr. - Aug. 7	
Fall dep. - Nov. 3	
Sq. C. NWR	24/5 1
Sq. C. NWR	25/5 1

87. Ruddy Turnstone, Arenaria interpres, Spr., Fall migr. throughout

Spr. arr. - May 18	Union Co. - unusual
Spr. dep. - May 30	De Soto NWR - uncommon
Fall arr. - Early August	Sq. C. NWR - uncommon
Fall dep. - Early Sept.	

## 2. Scolopacidae

88. American woodcock, Philohela minor, breeds throughout.

Spr. arr. - March 12	Union Co. - very rare and
Fall dep. - Nov. 3	casual visitor
Egg Dates - March 26 to May 30	De Soto NWR - uncommon
	Sq. C. NWR - rare

Bent - retiring. Nests in older thickets and brushy second growth along streams, where earthworms are available.

89. Common snipe, Capella gallinago, common, breeds to N.;

Spr., Fall migr. central, winter resident south.	
Spr. arr. - March 15	De Soto NWR - common
Fall dep. - Nov. 22	Sq. C. NWR - common
Egg Dates - May 16 to June 10	

Bent - nest on wet ground very near marshes.

A 16/10 1  
G 18/10 4  
G 26/10 13  
G 1/11 5  
G 5/11 4  
Xmas 2

Omaha

90. Long-billed curlew, Numenius americanus, occasional migr., formerly common, breeds further west now  
Spr. arr. - April 5                      Union Co. - very rare  
Fall dep. - Sept. 1
91. Whimbrel, Numenius phaeopus, uncommon, migr. Spr., Fall  
Spr. migr. - last of April  
Fall migr. - mid Sept.
92. Eskimo Curlew, Numenius borealis, formerly common migr.  
Spr., Fall  
Spr. arr. - April 5  
Spr. dep. - May 1  
Fall dep. - early Aug.  
Bent - nearly extinct. Last seen in study area 1926;  
elsewhere 1959.
93. Upland Plover, Bartramia longicauda, uncommon, Spr., Fall  
migr. in south, breeds elsewhere in study area.  
Spr. arr. - April 9                      De Soto NWR - occasional  
Fall dep. - Sept. 6                      Sq. C. NWR - rare  
Egg Dates - May 4 to July 1  
Bent - formerly nested on the prairie, now in pastures  
and cultivated fields.  
W 13/10 10  
26/5 1  
De Soto NWR
94. Spotted Sandpiper, Actitis macularia, very common, breeds  
throughout.  
Spr. arr. - April 18                      Union Co. - uncommon  
Fall dep. - Nov. 3                      De Soto NWR - common  
Egg Dates - May 14 to July 6                      Sq. C. NWR - common  
Bent - nesting very adaptable, but always close to water,  
solitary. In grass, under logs, rarely in a  
soggy meadow.  
G 2/9 1  
26/5 6  
De Soto NWR
95. Solitary Sandpiper, Tringa solitaria, common Spr., Fall  
migrant throughout.  
Spr. arr. - April 10                      Union Co. - uncommon  
Spr. dep. - May 26                      De Soto NWR - uncommon  
Fall arr. - July 1                      Sq. C. NWR - occasional  
Fall dep. - Oct. 5

96. Willet, Catoptrophorus semipalmatus, common Spr., Fall migr.  
 Spr. arr. - early May Union Co. - casual  
 Fall dep. - early Nov. De Soto NWR - uncommon  
 Sq. C. NWR - occasional  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 1
97. Greater Yellowlegs, Totanus melanoleucus, common Spr., Fall migr. throughout.  
 Spr. arr. - March 20 Union Co. - tolerably regular  
 Spr. dep. - May 19 De Soto NWR - common  
 Fall arr. - Aug. 14 Sq. C. NWR - uncommon  
 Fall dep. - Oct. 29  
 G 2/9 2  
 G 18/10 5  
 G 26/10 1
98. Lesser Yellowlegs, Totanus flavipes, fairly common, Spr., Fall migr. throughout.  
 Spr. arr. - March 11 Union Co. - common  
 Spr. dep. - May 28 De Soto NWR - uncommon  
 Fall arr. - July 14 Sq. C. NWR - abundant  
 Fall dep. - Nov. 17  
 G 2/9 2  
 G 6/9 10  
 G 8/9 12  
 G 11/9 30
99. Knot, Calidris canutus, occasional or migr.  
 Spr. arr. - Mid April De Soto NWR - occasional  
 Fall dep. - Mid Sept. Sq. C. NWR - rare
100. Pectoral Sandpiper, Erolia melanotos, Spr., Fall migr. throughout  
 Spr. arr. - March 10 Union Co. - tolerably common  
 Spr. dep. - May 12 Sq. C. NWR - common  
 Fall arr. - Aug. 8  
 Fall dep. - Nov. 24  
 G 2/9 1  
 G 6/9 4  
 G 8/9 6  
 G 11/9 2  
 W 15/9 3  
 M 8/10 14  
 M 15/10 10
101. White-rumped Sandpiper, Erolia fuscicollis, uncommon Spr., Fall migr. throughout  
 Spr. arr. - May 7 Union Co. - regular  
 Spr. dep. - May 30 De Soto NWR - uncommon  
 Fall arr. - Aug. 21 Sq. C. NWR - common  
 Fall dep. - Nov. 7

102. Baird's Sandpiper, Erolia bairdii, uncommon Spr., Fall migr.  
 Spr. arr. - April 9 De Soto NWR - uncommon  
 Spr. dep. - June 11 Sq. C. NWR - occasional  
 Fall arr. - Aug. 9  
 Fall dep. - Nov. 3  
 Sq. C. NWR 24/5 10  
 Sq. C. NWR 25/5 12
103. Least Sandpiper, Erolia minutilla, very common Spr., Fall migr. throughout.  
 Spr. arr. - April 20 Union Co. - common  
 Spr. dep. - May 25 De Soto NWR - uncommon  
 Fall arr. - July 24 Sq. C. NWR - occasional  
 Fall dep. - Oct. 10  
 G 2/9 2  
 G 6/9 1  
 G 8/9 2  
 A 17/5 2
104. Dunlin, Erolia alpina, less common Spr., Fall migr.  
 Spr. arr. - April 29 Union Co. - rare  
 Spr. dep. - June 4 De Soto NWR - uncommon  
 Fall arr. - Sept. 1 Sq. C. NWR - uncommon  
 Fall dep. - Nov. 7
105. Short-billed Dowitcher, Limnodromus griseus, Spr., Fall migr.  
 Spr. migr. - Early May De Soto NWR - uncommon  
 Fall migr. - Late August Sq. C. NWR - rare  
 G 1/11 1
106. Long-billed Dowitcher, Limnodromus scolopaceus, Spr., Fall migr.  
 Spr. arr. - April 28 Union Co. - uncommon spring  
 Fall dep. - Oct. 28 migrant  
 Sq. C. NWR - common
107. Stilt Sandpiper, Micropalama himantopus, uncommon Spr., Fall migr.  
 Spr. arr. - May 9 Union Co. - occasional  
 Fall arr. - July 12 De Soto NWR - occasional  
 Fall dep. - Nov. 11 Sq. C. NWR - rare  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 2
108. Semipalmated Sandpiper, Ereunetes pusillus, common Spr., Fall migr.  
 Spr. arr. - May 2 Union Co. - common  
 Spr. dep. - June 8 Sq. C. NWR - rare  
 Fall dep. - Oct. 30  
 Elk Is., S.D.  
 Sq. C. NWR  
 Sq. C. NWR  
 G 2/9 1  
 G 8/9 12  
 G 11/9 50  
 A 27/9 6  
 11/10 30  
 G 18/10 1  
 24/5 3  
 25/5 13



109. Western Sandpiper, Ereunetes mauri, Spr., Fall migr.  
 Spr. dep. - May 24 De Soto NWR - occasional  
 Fall dep. - early Sept. Sq. C. NWR - rare
110. Buff-breasted Sandpiper, Tryngites subruficollis, Spr., Fall migr.  
 Spr. migr. - April Sq. C. NWR - rare  
 Fall arr. - Aug. 12  
 Fall dep. - Sept. 15
111. Marbled Godwit, Limosa fedoa, Spr., Fall migr.  
 Spr. arr. - April 18 Sq. C. NWR - rare  
 Spr. dep. - May 16  
 Fall dep. - Oct. 16  
 Bent- formerly bred in the central plains, south to  
 Sioux City.
112. Hudsonian Godwit, Limosa haemastica, Spr., Fall migr.  
 Spr. arr. - May 8 Union Co. - uncommon spr. migrant  
 Spr. dep. - May 24 Sq. C. NWR - common  
 Fall arr. - Aug. 12  
 Fall dep. - Sept. 15  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 1
113. Sanderling, Crocethia alba, Spr., Fall migr.  
 Spr. arr. - April 29 Union Co. - rare  
 Spr. dep. - June 1 De Soto NWR - common  
 Fall arr. - Aug. 22 Sq. C. NWR - rare  
 Fall dep. - Oct. 4

### 3. Recurvirostridae

114. American Avocet, Recurvirostra americana, Spr., Fall migr.  
 Spr. arr. - May 5 Union Co. - rare  
 Fall dep. - Oct. 27 De Soto NWR - rare  
 Sq. C. NWR - occasional

### 4. Phalaropodidae

115. Wilson's Phalarope, Steganopus tricolor, Spr., Fall migr.  
 Spr. arr. - April 29 Union Co. - tolerably common  
 Fall dep. - Sept. 1 spring migrant  
 De Soto NWR - common  
 Sq. C. NWR - common  
 G 2/9 2  
 W 4/10 1
116. Northern Phalarope, Lobipes lobatus, Spr., Fall migr.  
 Spr. arr. - May 10 Union Co. - rare spr. migrant  
 Fall dep. - Oct. 26 De Soto NWR - uncommon  
 Sq. C. NWR - uncommon

## 5. Laridae

117. Herring Gull, Larus argentatus, Spr., Fall migr..Some in winter when water open.  
 Spr. dep. (avg.)- April 15      Union Co. - rare spr. migrant  
 Fall arrival - Oct. 8      De Soto NWR - uncommon  
    Sq. C. NWR - uncommon  
    W 29/11 3  
    21/3 2  
 Yankton, S.D.
118. Ring-billed Gull, Larus delawarensis, Spr., Fall migr.  
 Spr. arr. - March 19      Union Co. - common Spr. migrant  
 Fall dep. - Oct. 17      De Soto NWR - common  
    Sq. C. NWR - common  
    W 15/9 4  
    M 17/9 11  
    W 22/9 2  
 Yankton, S.D.      27/9 34  
 Elk Is., S.D.      27/9 7  
    W 27/9 4  
    W 9/10 7  
    W 6/10 8  
    W 7/10 42  
 Yankton, S.D.      11/10 39  
 Elk Is., S.D.      11/10 35  
    W 11/10 2  
    W 13/10 11  
    W 16/10 9  
    W 23/10 3  
 Yankton, S.D.      25/10 129  
    W 25/10 1  
 Elk Is., S.D.      25/10 5  
    W 29/11 15  
    A 30/11 15  
    W 3/12 11
119. Laughing Gull, Larus atricilla  
    Union Co. - one specimen found,  
    (1920) very rare  
 Bent - one seen in Iowa, 1894.
120. Franklin's Gull, Larus pipixcan, Spr., Fall migr.  
 Spr. transit - April 6 to      Union Co. - regular and  
    June 27      rather common  
 Fall dep. - Nov. 6      De Soto NWR - occasional  
    Sq. C. NWR - abundant  
    F 17/9 3  
    W 4/10 65  
    W 6/10 235  
 Yankton, S.D.      11/10 41  
 Elk Is., S.D.      11/10 130  
    W 23/10 36  
    G 26/10 5  
    A 3/11 1  
 Yankton, S.D.      21/3 30

121. Bonaparte's Gull, Larus philadelphia, Spr., Fall migr.  
 Spr. transit - late April      Sq. C. NWR - rare  
 Fall dep. - Nov. 3
122. Forster's Tern, Sterna forsteri, Spr., Fall migr.  
 Spr. arr. - April 7      Union Co. - tolerably common  
 Fall arr. - Oct. 14      spring migrant.  
                                  De Soto NWR - occasional  
                                  Sq. C. NWR - common  
                                  10/5 1  
                                  Burbank L., S.D.
123. Common Tern, Sterna hirundo, Spr., Fall migr.  
 Spr. arr. - April 20      De Soto NWR - uncommon  
 Fall dep. - early Nov.      Sq. Cr. Nwr - occasional
124. Least Tern, Sterna albi frons, breeds along river.  
 Spr. arr. - April 2      Union Co. - regular and per-  
 Fall dep. - Aug. 31      haps common, breeds  
 Egg dates - May 29 to July 4      in late summer on  
                                  Mo. River sandbars  
                                  De Soto NWR - common  
                                  Sq. C. NWR - uncommon  
 Bent - breeding colonies on low sandy islands in the Missouri.  
 Nesting delayed by Spr. high water. Formerly bred  
 as far upriver as Vermillion, S.D.
125. Caspian Tern, Hydroprogne caspia, Spr., Fall migr.  
 Spr. arr. - May 2      Union Co. - rare  
 Fall transit dates - Sept. 9 to De Soto NWR - rare  
                                  Oct. 15      Sq. C. NWR - rare
126. Black Tern, Chlidonias niger, breeds throughout  
 Spr. arr. - March 28      Union Co. - common migrant,  
 Fall transit - Aug. 8 to Oct. 15      may breed  
 Egg dates - May 11 to July 28      De Soto NWR - uncommon  
                                  Sq. C. NWR - common  
 Bent - sloughs, marshes and wet meadows  
                                  Burbank L., S.D.      10/16 10  
                                  Browns L., Ia.      15/5 3  
                                  Sq. C. NWR      24/5 3  
                                  Sq. C. NWR      25/5 3

## J. COLOMBIFORMES

## 1. Columbidae

127. Rock Dove, Columba livia, year-around throughout  
                                  Sq. C. NWR - occasional
128. Mourning Dove, Zenaidura macroura, year-around resident throughout  
                                  Union Co. - abundant summer,  
                                  occasional winter  
                                  De Soto NWR - abundant  
                                  Sq. C. NWR - abundant  
 Bent - Human satellite; nests near trunk on branch of  
 evergreen,

	G 6/9	20
	G 11/9	50
Omaha	Xmas	61
St. Joseph	Xmas	12
Yankton, S.D.	Xmas	3
	A 5/5	1
Browns L., Ia.	15/50	16
	A 17/5	10
	A 18/5	10
Sq. C. NWR	23/5	30
Burbank L., S.D.	1/6	6

129. Passenger Pigeon, Ectopistes migratorius, Extinct, formerly bred.

#### K. PSITTACIFORMES

##### 1. Psittacidae

130. Carolina Parakeet, Conaropsis carolinensis, Extinct, formerly bred

131. Monk Parakeet, Myiopsitta monachus, first seen in this area at Omaha - Oct. 27, 1972 nesting. (nest in fall in this hemisphere).

From Argentina; gregarious when not breeding  
heavy bill, yellowish abdomen, green back. large (2 M.  
diameter) stick nests high in trees (14 to 18 M.)

Omaha Xmas 2

#### L. CUCULIFORMES

##### 1. Cuculidae

132. Yellow-billed Cuckoo, Coccyzus americanus, breeds throughout

Spr. arr. - May 17 Union Co. - tolerably common

Fall dep. - Sept. 24 De Soto NWR - common

Egg dates - May 20 to July 19 Sq. C. NWR - common

Bent - prefer not very dense woods, orchards, roadsides  
(accustomed to humanity), low tree limbs or bushes.

Sq. C. NWR 23/5 1

Sq. C. NWR 25/5 1

Waubaunsee S.P.K., Ia. 26/5 1

133. Black-billed Cuckoo, Coccyzus erythrophthalmus, breeds throughout

Spr. arr. - May 13 Union Co. - somewhat less

Fall dep. - Sept. 25 abundant than

Egg dates - May 7 to July 20 Yellow-billed cuckoo

De Soto NWR - common

Sq. C. NWR - uncommon

Bent - nest in low elevations; near ground in small trees,  
bushes, thickets.

A 18/5 1

Waubaunsee S.P.K., Ia. 26/5 1

## M. STRIGIFORMES

## 1. Tytonidae

134. Barn Owl, Tyto alba, year-around resident throughout.  
 Union Co. - not likely to be numerous  
 Sq. C. NWR - rare

## 2. Strigidae

135. Screech Owl, Otus asio, year-round resident throughout.  
 Union Co. - tolerably common  
 De Soto NWR - uncommon  
 Sq. C. NWR - occasional  
 Omaha Xmas 5  
 St. Joseph Xmas 2  
 Yankton, S.D. Xmas 1
136. Great Horned Owl, Bubo virginianus, year-round resident throughout.  
 Union Co. - regular  
 De Soto NWR - common  
 Sq. C. NWR - common  
 Omaha Xmas 10  
 St. Joseph Xmas 2  
 Yankton, S.D. Xmas 3  
 Sioux City Xmas 1
137. Snowy Owl, Nyctea scandiaca, rarely winters irregularly in N. end of study area, less commonly to S.  
 Union Co. - casual  
 De Soto NWR - rare
138. Burrowing Owl, Speotyto cunicularia, Spr., Fall migrant breeds just N and W of area.
139. Barred Owl, Strix varia, year-round resident throughout.  
 Union Co. - regular  
 De Soto NWR - common  
 Sq. C. NWR - common  
 Omaha Xmas 4
140. Long-eared Owl, Asio otus, year-round resident.  
 Sq. C. NWR - rare
141. Short-eared Owl, Asio flammeus, year-round resident.  
 Union Co. - not uncommon migrant, a few breed  
 De Soto NWR - occasional  
 Sq. C. NWR - common
142. Western Burrowing Owl, Speotyto cunicularia hypugaea  
 Union Co. - uncommon migrant

143. Saw-whet Owl, Aegolius acadicus, year-round resident  
 De Soto NWR - common  
 Sq. C. Nwr - rare

#### N. CAPRIMULGIFORMES

##### 1. Caprimulgidae

144. Chuck-will's-widow, Caprimulgus carolinensis breeds in S. 2/3 of study area.  
 Spr. arr. - April 26                      Sq. C. NWR - rare  
 Fall dep. - Sept. 5  
 Egg dates - April 14 to June 16  
 Bent - mixed oak & pine woods with no undergrowth-builds no nest.
145. Whip-poor-will, Caprimulgus vociferous, breeds throughout.  
 Spr. arr. - April 11                      De Soto NWR - occasional  
 Fall dep. - Oct. 2                      Sq. C. NWR - occasional  
 Egg dates - May 9 to July 26  
 Bent - lay eggs on dry, well-drained ground in small mixed woods with no undergrowth.
146. Common Nighthawk, Chordeiles minor, breeds throughout.  
 Spr. arr. - May 10                      Union Co. - tolerably common  
 Fall dep. - Oct. 1                      De Soto NWR - uncommon  
 Egg dates - June 10 to July 1      Sq. C. NWR - occasional  
 Bent - open, barren, gravelly areas; or flat roof-tops and vineyards.

#### O. APODIFORMES

##### 1. Apodidae

147. Chimney Swift, Chaetura pelagica, breeds throughout area.  
 Spr. arr. - April 7                      Union Co. - tolerably common  
 Fall dep. - Sept. 26                      De Soto NWR - occasional  
 Egg dates - May 15 to July 3      Sq. C. NWR - occasional  
 Bent - normally in first 20 feet (from top) of chimney.  
          Vermillion                      5/5 10  
          Sq. C. NWR                      25/5 2
148. Ruby-throated Hummingbird, Archilochus colubris, breeds throughout area.  
 Spr. arr. - May 17                      De Soto NWR - rare  
 Fall dep. - Oct. 23                      Sq. C. NWR - occasional  
 Egg dates - June 1 to July 17  
 Bent - usually near or over water, 10-12 ft. above ground.

#### P. CORACIIFORMES

##### 1. Alcedinidae

149. Belted Kingfisher, Megaceryle alcyon, year-around resident throughout area.

Spr. arr. - March 18

Fall dep. - Nov. 11

Egg dates - May 10 to June 8

Union Co. - tolerably common  
summer resident,  
occasionally remains  
thruout the winter  
along the Big Sioux  
River.

De Soto NWR - occasional

Sq. C. NWR - occasional

Bent - nests in burrow in sandy bank as close as possible to fishing grounds.

Omaha

Xmas 2

W 22/9 1

Yankton, S.D.

27/9 1

Elk Is., S.D.

27/9 1

Elk Pt., S.D.

27/9 1

Sq. C. NWR

25/5 1

Burbank L., S.D.

1/6 1

#### Q. PICIFORMES

##### 1. Picidae

150. Yellow-shafted flicker, Colaptes auratus, year-round resident throughout.

Egg dates - April 30 to May 30

Union Co. - very common

De Soto NWR - common

Sq. C. NWR - common

Bent - found in areas with many dead trees (cut over).

Nest in holes (3-100 ft. high). Some birds

wintering to S. join residents there

Omaha

Xmas 120

St. Joseph

Xmas 41

Yankton, S.D.

Xmas 3

Sioux City,

Xmas 6

A 5/5 1

Browns L., Ia.

15/5 1

A 17/5 1

A 18/5 2

Sq. C. NWR

25/5 1

Waubausie S. PK., Ia.

26/5 1

Burbank L., S.D.

1/6 1

151. Red-shafted Flicker, Colaptes cafer collaris, Breeds in N. of area, year-round elsewhere.

Spr. arr. - April 1

Union Co. - casual winter or

Fall dep. - Oct. 15

summer visitor

Drifts into area from the

Rockies in Fall and winter

Egg dates - May 5 to July 1

Bent - found breeding in Yankton, (Northern limit of wintering) nest in holes near farms or cut-over woods.

Omaha

Xmas 2





Bent - nests in upland deciduous forests from 5 to 30 ft. high; shy, generally non-migratory.

Omaha	Xmas	26
St. Joseph	Xmas	7
Sioux City	Xmas	11
	A	18/5 1
Waubaunsie S. PK., Ia.		26/5 1

158. Downy Woodpecker, Dendrocopos pubescens, year-round resident throughout.

Egg dates - April 3 to June 3	Union Co.	- common
	De Soto NWR	- common
	Sq. C. NWR	- common

Bent - tame, prefers open woods, makes own nest-hole.

-not migratory, but moves locally away from family and excavates a solitary roost hole in fall.

Omaha	Xmas	166
St. Joseph	Xmas	26
Yankton, S.D.	Xmas	3
Sioux City	Xmas	28
Sq. C. NWR		24/5 1

## R. PASSERIFORMES

### 1. Tyrannidae

159. Eastern Kingbird, Tyrannus tyrannus, breeds throughout

Spr. arr. - April 23	Union Co.	- common
Fall dep. - Sept. 22	De Soto NWR	- abundant
Egg dates - May 2 to July 27	Sq. C. NWR	- common

Bent - nests in trees or stumps near water or half-submerged.

	A	5/5 2
	A	17/5 2
	A	18/5 2
Sq. C. NWR		23/5 1
Waubaunsie S. PK., Ia.		26/5 1

160. Western Kingbird, Tyrannus verticalis, breeds throughout.

Spr. arr. - April 26	Union Co.	- tolerably common
Fall dep. - Sept. 23	De Soto NWR	- occasional
Egg dates - June 4 to 25	Sq. C. NWR	- rare

Bent - nests anywhere except on the ground.

161. Great Crested Flycatcher, Myiarchus crinitus, breeds throughout.

Egg dates - May 25 to July 10	Union Co.	- tolerably common
Spr. arr. - May 2	De Soto NWR	- uncommon
Fall dep. - Sept. 17	Sq. C. NWR	- common

Bent - hole-nesting

Sq. C. NWR		24/5 1
Waubaunsie, S. PK., Ia.		26/5 1

162. Eastern Phoebe, Sayornis phoebe, breeds throughout area.  
 Spr. arr. - March 12 Union Co. - tolerably common  
 Fall dep. - Oct. 30 De Soto NWR - occasional  
 Egg dates - April 1 to June 16 Sq. C. NWR - common  
 Bent - nest in man-made structures (bridges, barns)  
 using moss and mud.
163. Acadian Flycatcher, Empidonax virescens, breeds N. to Sioux City.  
 Spr. arr. - May 5 Union Co. - uncommon migrant  
 Fall dep. - Oct. 14 and probable nester  
 Egg dates - May 30 to June 25 De Soto NWR - uncommon  
 Sq. C. NWR - uncommon  
 Bent - nests in low trees near streams (late May).  
 Waubaunsie S. PK., Ia. 26/5 1
164. Traill's Flycatcher, Empidonax traillii, breeds throughout  
 Spr. arr. - May 5 De Soto NWR - common  
 Fall dep. - Oct. 14  
 Egg dates - May 30 to June 25  
 Bent - Low in small bushes (Mid-June).  
 Sq. C. NWR 24/5 2  
 Sq. C. NWR 25/5 1
165. Least Flycatcher, Empidonax minimus, breeds throughout  
 Spr. arr. - April 24 Union Co. - fairly common Spr.,  
 Fall dep. - Oct. 28 Fall migr. not known  
 Egg dates - June 4 to 20 to nest.  
 De Soto NWR - common  
 Sq. C. NWR - uncommon  
 Bent - nests in deciduous open woodlands or apple trees.  
 Burbank L., S.D. 10/5 1  
 A 17/5 1  
 A 18/5 1  
 Waubaunsie S. PK., Ia. 26/5 1
166. Eastern Wood Peewee, Contopus virens, breeds throughout.  
 Spr. arr. - May 4 Union Co. - tolerably common  
 Fall dep. - Oct. 1 De Soto NWR - common  
 Egg dates - May 20 to July 22 Sq. C. NWR - common  
 Bent - nests 20 ft. high in open, mixed woods or old  
 orchards near field borders.  
 Sq. C. NWR 23/5 1  
 Waubaunsie S. PK., Ia. 26/5 1
167. Olive-sided Flycatcher, Nuttallornis borealis, Spr., Fall migr.  
 Spr. arr. - May 15 Union Co. - regular but common  
 Fall dep. - Mid. Sept. Sq. C. Nwr - uncommon

## 2. Alaudidae

168. Horned Lark, Eremophila alpestris, year-round resident throughout.

No migr. in study area      Union Co. - fairly common  
Egg dates - March 27 to July 16 De Soto Nwr - common  
Sq. C. NWR - common

Bent - nest on bare ground

Omaha	Xmas	262
St. Joseph	Xmas	81
Yankton	Xmas	9
Sioux City	Xmas	20

### 3. Hirundinidae

169. Tree Swallow, Iridoprocne bicolor, breeds in N., Spr., Fall migr. elsewhere.

Spr. arr. - March 18                      Union Co. - tolerably common  
Fall dep. - Oct. 31                        migrant and occa-  
Egg dates - May 10 to June 9            sional nester  
De Soto NWR - uncommon  
Sq. C. NWR - common

Bent - holes in trees, especially near water.

Browns L., Ia.	15/5 1
De Sota NWR	26/5 1

170. Bank Swallow, *Riparia riparia*, breeds throughout.

Spr. arr. - April 21                      Union Co. - common  
Fall dep. - Sept. 26                      De Soto NWR - abundant  
Egg dates - May 18 to June 22           Sq. C. NWR - abundant  
Bent - burrow into vertical stream banks, nest in colonies  
(late May)

G 8/9 20  
W 4/10 35

Burbank L., S.D.	10/5	11
Sq. C. NWR	23/5	1
Sq. C. NWR	24/5	3
De Sota NWR	26/5	4

171. Rough-winged Swallow, Stelgidopteryx ruficollis, breeds throughout.

Spr. arr. - March 27                      Union Co. - tolerably common  
Fall dep. - Sept. 11                      De Soto NWR - uncommon  
Egg dates - May 17 to June 6              Sq. C. NWR - occasional  
Bent - burrows in steep banks (solitary) or around  
buildings.

172. Barn Swallow, *Hirundo rustica*, breeds throughout.

Spr. arr. - April 15      Union Co. - common  
Fall dep. - Oct. 3      De Soto NWR - common  
Egg dates - May 12 to July 17      Sq. C. NWR - abundant  
Bent - Makes mud nest in barns or along rocky cliffs.

Burbank L., S.D.	10/5 5
	A 18/5 2
Sq. C. NWR	23/5 1
Sq. C. NWR	24/5 1

173. Cliff Swallow, Petrochelidon pyrrhonota, breeds throughout.

Spr. arr. - April 21	Union Co. - regular
Fall dep. - Sept. 10	De Soto NWR - common
Egg dates - May 20 to July 5	Sq. Cr. NWR - abundant

Bent - nests on cliffs or eaves of buildings.

174. Purple Martin, Progne subis, breeds throughout.

Spr. arr. - April 2	Union Co. - tolerably common
Fall dep. - Sept. 24	De Soto NWR - uncommon
Egg dates - late May	Sq. C. NWR - occasional

Bent - normally only nest in man-made nesting boxes.  
(late April).

4. Corvidae

175. Blue Jay, Cyanocitta cristata, year-round resident throughout.

Some migratory movement within Union Co. - common  
permanent summer and winter - De Soto NWR - abundant  
range in Spr. and Fall. Sq. C. NWR - common  
Egg dates - April 27 to June 11

Bent - Dense coniferous thickets below 60 ft.

	W 22/9 1
Omaha	Xmas 72
St. Joseph	Xmas 65
Yankton	Xmas 1
Sioux City	Xmas 20
	A 5/5 3
Browns L., Ia.	15/5 4
	A 18/5 3
Waubaunsie SP. Ia.	26/5 1

176. Black-billed Magpie, Pica pica, occasional winter visitor in N.

Union Co. - irregular winter  
visitor in small  
numbers.

De Soto NWR - rare

Bent - nonmigratory but given to erratic wandering.  
Found in central Nebraska.

177. Common Crow, Corvus brachyrhynchos, year-round resident.

Migrate through study area in Union Co. - abundant  
large numbers in Spr. and Fall De Sot NWR - uncommon  
Egg dates - March 27 to May 22 Sq. C. NWR - common

Bent - nests in trees when possible but otherwise anywhere.  
Breed isolated in pairs although they gather into  
roosts in the fall.

	W 15/9	10
	W 27/4	57
	W 4/10	6
	W 6/10	2
	W 7/10	1
	W 16/10	15
	A 30/11	7
Omaha	Xmas	115
St. Joseph	Xmas	2290
Yankton, S.D.	Xmas	3
Sioux City	Xmas	22
Yankton, S.D.	21/3	2
Sq. C. NWR	23/5	2

## 5. Paridae

178. Black-capped Chickadee, Parus atricapillus, year-round resident.  
Slight southern movement Union Co. - summer-tolerably  
in Fall. common, winter-  
abundant  
Egg dates - April 20 to June 11

De Soto NWR - common

Sq. C. NWR - common

Bent - nests in self-made holes a few feet from ground

	W 22/9	1
Omaha	Xmas	438
St. Joseph	Xmas	112
Yankton, S.D.	Xmas	7
Sioux City	Xmas	47
	A 5/4	7
	A 5/5	1
Browns L., Ia.	15/5	1
Sq. C. NWR	24/5	2

179. Tufted Titmouse, Parus bicolor, year-round resident, southern  
2/3rds of area; occasional in N. Union Co. - casual summer  
Not migratory resident  
Egg dates - April 16 to May 27 De Soto NWR - rare

Sq. C. NWR - common

Bent - tree cavities in river-bottom forests (late April)

Omaha	Xmas	113
St. Joseph	Xmas	25

## 6. Sittidae

180. White-breasted Nuthatch, Sitta carolinensis, year-round throughout.  
Not migratory Union Co. - winter-common;  
Egg dates - April 29 to May 11 summer-regular

Sq. C. NWR - occasional

Bent - use mature oak or maple forests with decayed trees,  
occupy existent cavity.

Omaha	Xmas	150
St. Joseph	Xmas	14
Yankton	Xmas	1
Sioux City	Xmas	14
Waubausie S.PK., Ia.	26/5	1

181. Red-breasted Nuthatch, Sitta canadensis winter resident throughout.

Spr. arr. - April 14	Union Co. - uncommon
Spr. dep. - May 13	Sq. C. NWR - occasional
Fall arr. - Sept. 9	
Fall dep. - Oct. 29	
Bent - doesn't breed here	
Omaha	Xmas 3
St. Joseph	Xmas 6

## 7. Certhiidae

182. Brown Creeper, Certhia familiaris, winter resident.

Spr. arr. - March 18	Union Co. - tolerably common
Spr. dep. - May 9	De Soto NWR - uncommon
Fall arr. - Sept. 18	Sq. C. NWR - uncommon
Fall dep. - Nov. 15	
Bent - Omaha, Neb. S. edge of breeding area. Nests behind loosened bark of dead trees (us. Fir) or in Knotholes (in Nebraska only).	
Omaha	Xmas 13
St. Joseph	Xmas 13
Sioux City	Xmas 4
N. of Vermillion	8/4 1

## 8. Troglodytidae

183. House Wren, Troglodytes aedon, breeds throughout.

Spr. arr. - April 17	Union Co. - abundant
Fall dep. - Oct. 2	De Soto NWR - abundant
Egg dates - May 10 to July 27	Sq. C. NWR - common
Bent - eccentric in choice of site; naturally a hollow stump-now semidomesticated, inhabit any hollow outdoor human artifact.	
	A 17/5 1
	A 18/5 5
Sq. Cr. NWR	24/5 2
Waubausie, S.PK., Ia.	26/5 2

184. Winter Wren, Troglodytes troglodytes, uncommon winter resident S. to Omaha.

Spr. arr. - April 10	
Fall dep. - Oct. 5	
Omaha	Xmas 5
St. Joseph	Xmas 1

185. Be Wren, Thryomanes bewickii, year-round resident.

Spr. arr. - March 19	Sq. C. NWR - uncommon
Fall dep. - Oct. 1	
Egg dates - March 28 to June 17	
Bent - Knotholes or old woodpecker holes in the wild; also semi-domesticated - uses any available opening.	

186. Carolina Wren, Thryothorus ludovicianus, year-round in S., occasional in No.  
 Non-migratory Sq. C. NWR - occasional  
 Egg dates - March to July 9  
 Bent - In the wild in holes or under roots or in a hole in a bank. Also semi-domesticated.  
 Omaha Xmas 2
187. Long-billed Marsh Wren, Telmatodytes polustris, breeds throughout  
 Spr. arr. - April 17 Union Co. - common summer  
 Fall dep. - Nov. 12 resident  
 Egg dates - May 26 to July 27 De Soto NWR - occasional  
 Sq. C. NWR - uncommon  
 Bent - Nest in wet marshes, prefer narrowleaf cattail (Typha angustifolia) or less often bullrush or sedges. Nest is oval and high in the air.  
 A 5/11 1  
 Burbank L., S.D. 10/5 1  
 Browns L., Ia. 15/5 1  
 A 17/5 1  
 Burbank L., S.D. 1/6 6
188. Short-billed Marsh Wren, Cistothorus platensis, breeds throughout  
 Spr. arr. - April 28 Union Co. - regular  
 Fall dep. - Oct. 13 De Soto NWR - occasional  
 Egg dates - June 9 to June 19 Sq. C. NWR - uncommon  
 Bent - drier marshes, wet meadows or sedge meadows (Carex) nest is low-to-ground and globular.

## 9. Mimidae

189. Mockingbird, Mimus polyglottos, year-round resident Southern  
 2/3rds, occasional to N.  
 Egg dates - May 2 to June 23 Union Co. - casual resident  
 Non-migratory occasional winter  
 De Soto NWR - rare  
 Sq. C. NWR - occasional  
 Bent-Nests low (3-10 ft.) preferably near human habitation, in vines or ivy near a house.  
 St. Joseph Xmas 7
190. Catbird, Dumetella carolinensis, breeds throughout.  
 Spr. arr. - April 29 Union Co. - common  
 Fall dep. - Oct. 1 De Soto NWR - common  
 Egg dates - May 12 to June 28 Sq. C. NWR - common  
 Bent - low nests (2-6 ft.) in thickets and vines, often close to marshes or streams.  
 Browns L., Ia. 15/5 2  
 A 17/5 2  
 A 18/5 2  
 Sq. C. NWR 23/5 1  
 Sq. C. NWR 25/5 2  
 Burbank L., S.D. 1/6 1

191. Brown Thrasher, Toxostoma rufum, breeds throughout  
 Spr. arr. - April 27 Union Co. - common  
 Fall dep. - Oct. 3 De Soto NWR - common  
 Egg dates - April 29 to June 19 Sq. C. NWR - common  
 Bent - in tangles and shrubbery low to ground (1-2 ft.)  
 often near human habitation.

Omaha	Xmas	1
	A 5/5	2
Burbank L., S.D.	10/5	4
Browns L., Ia.	15/5	1
	A 17/5	2
	A 18/5	5
Sq. C. NWR	23/5	1
Sq. C. NWR	24/1	1
Sq. C. NWR	25/5	1

# 10. Turdidae

192. Robin, Turdus migratorius, year-round resident throughout.  
 Spr. arr. - Feb. 28 Union Co. - very common  
 Fall dep. - Nov. 26 summer resident  
 Egg dates - April 16 to July 20 De Soto NWR - common  
 Sq. C. NWR - common

Bent - nests everywhere but in bird houses.

Omaha	Xmas	2
St. Joseph	Xmas	1
	A 5/4	10
Burbank, L., S.D.	10/5	4
	A 17/5	3
Sq. C. NWR	23/5	2
Sq. C. NWR	25/5	1

193. Wood Thrush, Hylocichla mustelina, breeds throughout.  
 Spr. arr. - April 25 Union Co. - tolerably common  
 Fall dep. - Sept. 30 De Soto NWR - common  
 Egg dates - May 3 to July 10 Sq. C. NWR - occasional  
 Bent - nest 10 ft. up in saplings or undergrowth in low,  
 cool, damp forests near streams.  
 Sq. C. NWR 24/5 1  
 Waubaunsie S.PK., Ia. 26/5 1

194. Swainson's Thrush, Hylocichla ustulata, Spr., Fall migr.  
 Spr. arr. - April 28 Union Co. - common Spr.,  
 Spr. dep. - June 3 Fall migr.  
 Fall arr. - Early August De Soto NWR - uncommon  
 Fall dep. - Oct. 16 Sq. C. NWR - occasional

195. Eastern Hermit Thrush, Hylocichla guttata faxoni  
 Spr. arr. - March 30 Union Co. - uncommon migrant  
 Spr. dep. - mid May  
 Fall dep. - Oct. 24



196. Gray-cheeked Thrush, Hylocichla minima, Spr., Fall migr.  
 Spr. arr. - April 29 Union Co. - tolerably common  
 Spr. dep. - June 4  
 Fall arr. - early Sept.  
 Fall dep. - Oct. 16  
 A 17/5 1
197. Veery, Hylocichla fuscescens, Spr., Fall migr.  
 Spr. arr. - May 2 Union Co. - rare Spr.,  
 Fall dep. - Sept. 23 Fall migr.
198. Eastern Bluebird, Sialia sialis, year-round S. part; breeds in N.  
 Spr. arr. - March 21 Union Co. - regular Spr., Fall  
 Fall dep. - Nov. 27 migrant; occasional  
 Egg dates - March 26 to June 20 summer resident  
 De Soto NWR - uncommon  
 Sq. C. NWR - uncommon  
 Bent - in settled areas most nest in bird-boxes, otherwise  
 in old orchards in cavities of trees  
 Omaha Xmas 10  
 A 5/5 3  
 A 17/5 1

## 11. Sylviidae

199. Blue-grey Gnatcatcher, Polioptila caerulea, breeds throughout.  
 Spr. arr. - April 12 Sq. C. NWR - common  
 Fall dep. - Sept. 15  
 Egg dates - April 15 to May 25  
 Bent - In very wide range of habitats, nests in any kind of  
 tree; often scrub oak or pine.
200. Golden-crowned Kinglet, Regulus satrapa, winter resident  
 throughout.  
 Spr. arr. - March 20 Union Co. - regular Spr.,  
 Spr. dep. - May 6 Fall migrant a  
 Fall arr. - Oct. 7 few in winter  
 Fall dep. - Nov. 27 Sq. C. NWR - uncommon  
 Omaha Xmas 17  
 St. Joseph Xmas 4
201. Ruby-crowned Kinglet, Regulus calendula, Spr., Fall migrant  
 in N., winter resident in S.  
 Spr. arr. - March 24 Union Co. - tolerably common  
 Spr. dep. - May 21 De Soto NWR - common  
 Fall dep. - Nov. 1  
 Omaha Xmas 1

## 12. Motacillidae

202. Water Pipit, Anthus spinoletta, Spr., Fall migr.  
 Spr. arr. - March 27 Union Co. - regular  
 Spr. dep. - May 27  
 Fall arr. - Sept. 4  
 Fall dep. - Nov. 1

G 18/10 3

203. Sprague's Pipit, Anthus spragueii, Spr., Fall migra.  
 Spr. arr. - April 14  
 Spr. dep. - April 26  
 Fall arr. - Oct. 1  
 Fall dep. - Oct. 30

## 13. Bombycillidae

204. Bohemian Waxwing, Bombycilla garrulus occasional winter resident throughout.  
 Fall arr. - Nov. 29 Union Co. - very regular  
 Spr. dep. - April 25  
 Bent - does not breed here - irregular winter or early spr. migrations, erratic timing.
205. Cedar Waxwing, Bombycilla cedrorum, year-round throughout.  
 Spr. arr. - Feb. 21 Union Co. - regular winter  
 Fall dep. - Nov. 15 De Soto NWR - uncommon  
 Egg dates - June 7 to Aug. 19 Sq. C. NWR - common  
 Bent - nests high in evergreens, late in the season  
 Omaha Xmas 7  
 St. Joseph Xmas 9

## 14. Laniidae

206. Northern Shrike, Lanius excubitor, winter resident throughout.  
 Spr. dep. - March 28 Union Co. - rare  
 Fall arr. - Oct. 27  
 Omaha Xmas 1
207. Loggerhead Shrike, Lanius ludovicianus, breeds (summer resident)  
 Spr. arr. - March 24 Union Co. - tolerably common  
 Fall dep. - Nov. 19 De Soto NWR - uncommon  
 Egg dates - April 4 to July 5 Sq. C. NWR - occasional  
 Bent - nests in young oaks at medium elevation; tame.  
 Omaha Xmas 1  
 St. Joseph Xmas 1

## 15. Sturnidae

208. Starling, Sturnus vulgaris, Introduced, year-round resident  
 Union Co. - common  
 De Soto NWR - common  
 Sq. C. NWR - abundant  
 G 11/9 70  
 G 18/10 107  
 Omaha Xmas 1407  
 St. Joseph Xmas 857  
 Yankton Xmas 44

Sioux City

Xmas 5000

A 5/4 4

Brown's L., Ia.

15/5 10

## 16. Vireonidae

209. Bell's Vireo,
- Vireo bellii
- , breeds throughout.

Spr. arr. - April 30

Union Co. - common

Fall dep. - Sept. 5

De Soto NWR - common

Egg dates - May 25 to July 6 Sq. C. NWR - common

Bent - Along bottom lands of the upper Missouri river, in low, dense thickets nest low to the ground.

A 5/5 1

A 17/5 1

A 18/5 1

Sq. C. NWR

23/5 2

Sq. C. NWR

25/5 1

210. Yellow-Throated Vireo,
- Vireo flavifrons
- , breeds throughout.

Spr. arr. - April 26

Union Co. - Spr., Fall

Fall dep. - Oct. 3

migrant

Egg dates - April 24 to July 4

Bent - nests in decid. trees low to ground. Tame.

211. Solitary Vireo,
- Vireo solitarius
- , Spr., Fall migr.

Spr. arr. - April 29

Union Co. - regular

Fall dep. - Oct. 15

212. Red-eyed Vireo,
- Vireo olivaceus
- , breeds throughout.

Spr. arr. - April 20

Union Co. - tolerably common

Fall dep. - Oct. 1

De Soto NWR - occasional

Egg dates - June 3 to July 2 Sq. C. NWR - common

Bent - live in tops of decid. trees, build pensile nests

Sq. C. NWR

24/5 1

213. Philadelphia Vireo,
- Vireo philadelphicus
- , Spr., Fall migr. throughout.

Spr. arr. - May 16

Spr. dep. - May 31

Fall arr. - Aug. 31

Fall dep. - Oct. 1

214. Warbling Vireo,
- Vireo gilvus
- , breeds throughout.

Spr. arr. - April 25

Union Co. - tolerably common

Fall dep. - Sept. 30

De Soto NWR - abundant

Egg dates - mid May thru June Sq. C. NWR - uncommon

Bent - a semi-pensile nest very high in Poplars, Elms, or Maples.

Sq. C. NWR

25/5 1



221. Cape May Warbler, Dendroica tigrina, migr.  
 Spr. arr. - May 2  
 Spr. dep. - June 3  
 Fall arr. - Aug. 25  
 Fall dep. - Nov. 27
222. Prothonotary Warbler, Protonotaria citrea, breeds in S. half.  
 Spr. arr. - Aug. 26 Union Co. - a summer resident  
 Fall dep. - Aug. 31  
 Egg dates - May 6 to June 21  
 Bent - In damp and swampy river bottoms, and low-lying, occasionally flooded woods among Salix niger and Cephalanthus occidentalis; nests in cavities 5-10 ft. high, usually above water.
223. Golden-winged Warbler, Vermivora chrysoptera, Spr., Fall migr.  
 Spr. arr. - April 27  
 Spr. dep. - May 25  
 Fall dep. - Sept. 30
224. Blue-Winged Warbler, Vermivora pinus, Breeds in S. half.  
 Spr. arr. - April 28  
 Fall dep. - Sept. 20  
 Egg dates - Mid May through June  
 Bent - In deep, swampy woods nests in clumps of vines, N. Missouri state part of "center of abundance" for this bird.
- |                        |          |
|------------------------|----------|
|                        | A 18/5 1 |
| Sq. C. NWR             | 24/5 1   |
| Sq. C. NWR             | 25/5 1   |
| Waubausie, S. PK., Ia. | 26/5 1   |
225. Tennessee Warbler, Vermivora peregrina, Spr., Fall migr.  
 Spr. arr. - April 25 Union Co. - very common Spr.,  
 Spr. dep. - June 6 Fall migr.  
 Fall arr. - Aug. 20  
 Fall dep. - Oct. 14  
 Vermillion 5/5 dozens  
 A 18/5 2
226. Myrtle Warbler, Dendroica coronata, Spr., Fall Migr.  
 Spr. arr. - April 3 Union Co. - abundant migrant  
 Spr. dep. - June 1 De Soto NWR - abundant  
 Fall arr. - Sept. 30 Sq. C. NWR - common  
 Fall dep. - Nov. 15  
 Burbank L., S.D. 10/5 4  
 Browns L., Ia. 15/5 4
227. Black-throated Green Warbler, Dendroica virens, Spr., Fall migr.  
 Spr. arr. - April 8 Union Co. - uncommon migrant  
 Spr. dep. - May 27 De Soto NWR - common  
 Fall arr. - Aug. 25 Sq. C. NWR - uncommon  
 Fall dep. - Oct. 17

228. Cerulean Warbler, Dendroica cerulea, breed N. half of area.  
     Spr. arr. - April 18  
     Fall dep. - late Sept.  
     Egg dates - late May through  
                 early July  
     Bent - In treetops of heavy deciduous woods, open forested  
             lowlands along a stream, nests in maples, elms and  
             oaks very high up.
229. Blackburnian Warbler, Dendroica fusca, Spr., Fall migr.  
     Spr. arr. - April 28                      Union Co. - uncommon migrant  
     Spr. dep. - June 1  
     Fall arr. - late Aug.  
     Fall dep. - Oct. 14
230. Yellow-Throated Warbler, Dendroica dominica, Breeds in S. half  
     Spr. arr. - April 28  
     Fall dep. - Oct. 14  
     Egg dates - late May to mid June  
     Bent - Breeds in oak or pine with Spanish Moss whenever  
             possible. Breeds W. to central Missouri.
231. Chestnut-sided Warbler, Dendroica pensylvanica, breeds throughout  
     Spr. arr. - April 30                      Union Co. - irregular and  
     Fall dep. - Sept. 23                                  uncommon migrant  
     Egg dates - late May to early      De Soto NWR - uncommon  
                                 June                      Sq. C. NWR - uncommon  
     Bent - Prefers second-growth and low thickets, nest a foot  
             from ground.
232. Bay-breasted Warbler, Dendroica castanea, Spr., Fall migr.  
     Spr. arr. - May 7                      De Soto NWR - uncommon  
     Spr. dep. - June 4  
     Fall dep. - Oct. 2
233. Blackpoll Warbler, Dendroica striata, Spr., Fall migr.  
     Spr. arr. - May 3                      Union Co. - tolerably common  
     Spr. dep. - Aug. 28                                  migrant  
     Fall dep. - Oct. 16                      De Soto NWR - common  
    Sq. C. NWR - uncommon  
    A 18/5 1
234. Pine Warbler, Dendroica pinus, Spr., Fall migr.  
     Spr. arr. - April 17                      Union Co. - rare migrant  
     Fall dep. - Oct. 1
235. Prairie Warbler, Dendroica discolor, breeds throughout  
     Spr. arr. - April 11                      Sq. C. NWR - uncommon  
     Fall dep. - Sept. 23  
     Egg dates - late May thru  
                                 mid June  
     Bent - cut-over and grown up clearings, deep in hazel  
             thickets 2 or 3 feet up.

236. Palm Warbler, Dendroica palmarum, Spr., Fall migr.  
 Spr. arr. - April 17 Union Co. - rather uncommon  
 Spr. dep. - May 26 migrant  
 Fall arr. - Aug. 31  
 Fall dep. - Sept. 27
237. Ovenbird, Seiurus aurocapillus, breeds throughout.  
 Spr. arr. - April 24 Union Co. - regular and toler-  
 Fall dep. - Oct 26 ably common migrant,  
 Egg dates - May. 16 to July 26 possibly nesting.  
 De Soto NWR - occasional  
 Sq. C. NWR - uncommon  
 Bent - Nests in open woodlands without undergrowth; on the  
 ground (same as whippoorwill and thrushes).  
 Waubaunsie, S. PK., Ia. 26/5 1
238. Kentucky Warbler, Oporornis formosus, breeds in S. of area.  
 Spr. arr. - April 26  
 Fall dep. - Sept. 13  
 Egg dates - May 10 to June 6  
 Bent - In bottomland woods and dense, damp thickets in the  
 undergrowth inches above the ground.
239. Northern Waterthrush Seiurus noveboracensis, Spr., Fall migr.  
 Spr. arr. - April 30 Union Co. - regular and toler-  
 Fall arr. - Aug. 14 ably common  
 Fall dep. - Oct. 13 migrant
240. Louisiana Waterthrush Seiurus motacilla, breeds in S. part of  
 area.  
 Spr. arr. - April 20 Union Co. - regular migrant  
 Fall dep. - Sept. 30  
 Egg dates - May through mid-June  
 Bent - In bottomlands and borders of creeks, preferably near  
 fast-running water (In company with the Prothonotary  
 Warbler) nests low in fallen tree roots or stumps or  
 in stream banks among tree roots.
241. Connecticut Warbler, Oporornis agilis, S. migr. only.  
 Spr. arr. - May 5  
 Fall arr. - Aug. 22  
 Fall dep. - Oct. 1
242. Mourning Warbler, Oporornis philadelphia, Spr., Fall migr.  
 Spr. dep. - May 6 Union Co. - regular but not  
 Fall arr. - Aug. 23 common Spr. migr.  
 Fall dep. - Oct. 8
243. Yellowthroat Geothlypis trichas, breeds throughout  
 Spr. arr. - April 19 Union Co. - very common  
 Fall dep. - Oct. 15 De Soto NWR - abundant  
 Egg dates - late May thru June Sq. C. NWR - common

Bent - In tangled undergrowth along streams or swamp margins;  
or in the grass near marshes (with swamp sparrows and  
Marsh wrens), nests low to ground in grass or cattails.

	A 17/5	2
Sq. C. NWR	23/5	1
Sq. C. NWR	24/5	1
Sq. C. NWR	25/5	3
Burbank L., S.D.	1/6	2

244. Yellow-breasted Chat, Icteria virens, breeds throughout.

Spr. arr. - May 5                      Union Co. - tolerably common  
Fall dep. - Sept 26                      summer resident  
Egg dates - Mid-May through June

Bent - In dense thickets on low, damp ground along streams  
or swamps, also tangled upland thickets overgrown  
with briars, nests 2-3 feet up in blackberry, huckle-  
berry, or bushes.

Sq. C. NWR	24/5	1
Sq. C. NWR	25/5	1

245. Hooded Warbler, Wilsonia citrina, breeds at S. edge of study area.

Spr. arr. - May 7  
Fall dep. - Sept. 20  
Egg dates - May through mid June  
Bent - In hardwood forests near rivers, nests 2-3 feet  
from ground in thickets

246. Wilson's Warbler, Wilsonia pusilla, Spr., Fall migr.

Spr. arr. - May 7                      Union Co. - not common  
Fall arr. - Aug. 17  
Fall dep. - Oct. 3

247. Canada Warbler, Wilsonia canadensis, Spr., Fall migr.

Spr. arr. - May 18                      Union Co. - uncommon migrant  
Fall arr. - Aug. 13  
Fall dep. - Oct. 4

248. American Redstart, Setophaga ruticilla, breeds throughout.

Spr. arr. - May 3                      1 Union Co. - common migrant  
Fall dep. - Sept. 16                      and regular breeder  
Egg dates - May 25 to July 21      De Soto NWR - abundant

Sq. C. NWR - common

A 17/5 1

A 18/5 1

Sq. C. NWR	24/5	1
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18. Ploceidae

249. House Sparrow, Passer domesticus, Introduced year-round  
residents throughout.

Non-migratory                      Union Co. - abundant  
Egg dates - May 10 to July 5      De Soto NWR - abundant  
Sq. C. NWR - abundant



Omaha	Xmas 4092
St. Joseph	Xmas 1128
Yankton	Xmas 308
Sioux City	Xmas 500

## 19. Icteridae

250. Bobolink, Dolichonyx oryzivorus, breeds throughout.  
 Spr. arr. - May 9 Union Co. - uncommon migrant  
 Fall dep. - Oct. 18 not known to nest  
 Egg dates - May 25 to July 11 De Soto NWR - occasional  
 Sq. C. NWR - uncommon  
 Bent - nests in tall-grass meadows in hollows on the ground.  
 Mid-May.
251. Eastern Meadowlark, Sturnella magna, year-round resident  
 sometimes does not winter in N.  
 Spr. arr. (avg) - March 12 Union Co. - not reported in  
 Fall dep. - Nov. 30 Union Co.  
 Egg dates - April 6 to De Soto NWR - common  
 July 1 Sq. C. NWR - common  
 Bent - nests in grasslands, late April.  
 A 5/5 1  
 Sq. C. NWR 23/5 1  
 Burbank L., S.D. 1/6 1
252. Western Meadowlark, Sturnella neglecta, year-round resident.  
 Sometimes does not winter in N.  
 Spr. arr. - Feb. 20 Union Co. - common summer  
 Fall dep. (avg.) - Oct. 30 resident  
 Egg dates - May 2 to June 10 De Soto NWR - abundant  
 Sq. C. NWR - occasional  
 Bent - Nest in meadows, roofed over; early April.  
 Omaha Xmas 332  
 St. Joseph Xmas 215  
 Sioux City Xmas 40  
 Vermillion 1/5 W. Meadowlark  
 Burbank, L., S.D. 1/6 2
253. Yellow-headed Blackbird, Xanthocephalus xanthocephalus, breeds  
 throughout.  
 Spr. arr. (medium) - April 23 Union Co. - common migrant,  
 Fall dep. (avg.) - Sept. 26 may nest  
 Egg dates - May 19 to De Soto NWR - occasional  
 June 12 Sq. C. NWR - uncommon  
 Bent - nests in colonies in marshes, must have 2-4 ft.  
 deep water around catails (Scirpus, Typha, Phragmites spp.)  
 Nests woven to reeds 3 ft. above water.  
 Burbank L., S.D. 10/5 20  
 Browns L., Ia. 15/5 5  
 Sq. C. NWR 23/5 4  
 Burbank L., S.D. 1/6 6

254. Red-winged Blackbird, Agelaius phoeniceus, year-round resident throughout, sometimes absent in winter in N.  
 Spr. arr. - Feb. 1 Union Co. - common summer  
 Fall dep. - Nov. 8 resident, usually  
 (avg.) flocks remain all  
 Egg dates - June 2 to July 5 winter.  
 De Soto NWR - abundant  
 Sq. C. NWR - abundant  
 Bent - Drier edges of marshes, or wet meadows.  
 W 22/9 3  
 W 23/10 5000  
 G 26/10 40  
 G 1/11 200  
 Omaha Xmas 20  
 St. Joseph Xmas 2561  
 Yankton Xmas 52  
 Sioux City Xmas 5  
 Burbank L., S.D. 10/5 30  
 Browns L., Ia. 15/5 5  
 Sq. C. NWR 23/5 20  
 Sq. C. NWR 25/5 6  
 Burbank L., S.D. 1/6 10
255. Orchard Oriole, Icterus spurius, breeds throughout.  
 Spr. arr. - April 23 Union Co. - regular summer  
 Fall dep. - Sept. 12 resident  
 Egg dates - May 13 to June 20 De Soto NWR - common  
 Sq. C. NWR - common  
 Bent - nest in cottonwoods and willows near water, or in  
 marshes (Phragmites spp.) semi-pensile.  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 1
256. Baltimore Oriole, Icterus galbula, breeds throughout.  
 Spr. arr. - April 26 Union Co. - common summer  
 Fall dep. - Oct. 10 resident  
 Egg dates - May 25 to June 14 De Soto NWR - abundant  
 Sq. C. NWR - common  
 Bent - pensile nest near top of large tree, end of May.  
 Browns L., Ia. 15/5 2  
 A 17/5 2  
 A 18/5 5  
 Sq. C. NWR 23/5 3  
 Sq. C. NWR 24/5 1  
 Sq. C. NWR 25/5 1  
 Burbank L. & S.D. 1/6 3
257. Rusty Blackbird, Euphagus carolinus, Spr., Fall migr. in N.  
 winter res. in S.  
 Spr. arr. (median) - March 1 Union Co. - early spring and  
 Spr. dep. - May 16 late fall migrant  
 Fall Arr. - Aug. 27 in flocks  
 Fall dep. - Nov. 25 De Soto NWR - occasional  
 Sq. C. NWR - common

	G 18/10	3
Omaha	Xmas	28
St. Joseph	Xmas	6

258. Brewer's Blackbird, Euphagus cyanocephalus, Spr., Fall migr. (may breed).  
 Spr. arr. - March 9 Union Co. - reported in spr.  
 Spr. dep. - May 19  
 Fall arr. - Aug. 20  
 Fall dep. (avg.) - Nov. 13  
 Egg dates - May 25 to June 4  
 Bent - nest in trees near streams.  
 Omaha Xmas 75
259. Common Grackle, Quiscalus quiscula, breeds in N., year round in S.  
 Spr. arr. - Feb. 10 De Soto NWR - common  
 Fall dep. - Dec. 26 Sq. C. NWR - common  
 Egg dates - May 10 to June 16  
 Bent - nest anywhere- trees, bushes, marshes, cavities.  
 Omaha Xmas 49  
 St. Joseph Xmas 49  
 Sioux City Xmas 25  
 A 5/4 20  
 Burbank L., S.D. 10/5 5  
 Browns La, Ia. 15/5 20  
 A 17/5 6  
 Sq. C. NWR 23/5 10  
 Burbank L., S.D. 1/6 4
260. Brown-headed Cowbird, Molothrus ater, breeds throughout.  
 Spr. arr. - Feb. 21 Union Co. - common summer  
 Fall dep. - Dec. 3 resident  
 Egg dates - April 26 to July 11 De Soto NWR - abundant  
 Sq. C. NWR - common  
 Bent - wholly nest usually upon yrannidae,  
 Fringillidae, Virionidae, Parulidae.  
 Omaha Xmas 127  
 St. Joseph Xmas 94  
 A 5/5 12  
 Browns L., Ia. 15/5 100  
 Sq. C. NWR 25/5 2  
 Burbank L., S.D. 1/6 4

## 20. Thraupidae

261. Scarlet Tanager, Piranga olivacea, breeds throughout  
 Spr. arr. - April 27 Union Co. - regular migrant  
 Fall dep. - Sept. 29 and summer resi-  
 dent  
 Egg dates - May 28 to Aug. 2 Sq. C. NWR - occasional  
 Bent - nests on horizontal tree branch 20 ft. from ground  
 (often oak).

262. Summer Tanager, Piranga rubra, breeds central and S.  
 Spr. arr. - April 30                      Sq. C. NWR - occasional  
 Fall dep. - Sept. 26  
 Egg dates - March 24 to June 5  
 Bent - nest in Pine and scrub oaks

## 21. Fringillidae

263. Cardinal, Richmondia cardinalis, year-round throughout.  
non-migratory Union Co. - fairly common  
Egg dates - April 15 to July 28 permanent resident  
De Soto NWR - common  
Sq. C. NWR - abundant  
Bent - few nests in trees, mainly low, tangled shrubbery  
and thickets within a wide variety of habitats.  
Omaha Xmas 207  
St. Joseph Xmas 89  
Yankton Xmas 1  
Sioux City Xmas 19  
Sq. C. NWR 24/5 2  
Waubausie, S.P.K., Ia. 26/5 1
264. Rose-breasted Grosbeak, Pheucticus ludovicianus, breeds throughout  
Spr. arr. - April 20 Union Co. - tolerably common  
Fall dep. - Sept. 25 summer resident  
Egg dates - May 23 to June 7 De Soto NWR - abundant  
Sq. C. NWR - occasional  
Bent - prefer wooded borders of swamps and streams, and dense  
growth of understory and bushes along ecotone.  
A 5/5 1  
Browns L., Ia. 15/5 1  
A 17/5 2  
A 18/5 5  
Sq. C. NWR 24/5 1
265. Blue Grosbeak, Guiraca caerulea, breeds throughout.  
Spr. arr. - May 13 Union Co. - uncommon summer  
Fall dep. - Sept. 19 resident  
Egg dates - May 5 to Aug. 30  
Bent - nests at medium height in small trees among thickets  
along streams and ecotones.
266. Indigo Bunting, Passerina cyanea, breeds throughout.  
Spr. arr. - April 29 Union Co. - tolerably common  
Fall dep. - Oct. 8 summer resident  
Egg dates - May 27 to Aug. 19 De Soto NWR - common  
Sq. C. NWR - common  
Bent - always nest near water in riparian woodland or fresh-  
water marshes.  
Sq. C. NWR 24/5 2  
Sq. C. NWR 25/5 2

267. Lazuli Bunting, Passerina amoena  
 Spr. - May 15 Union Co. - a very rare migrant  
 Fall - Sept. 13
268. Painted Bunting, Passerina ciris, occasional in S. in summer.  
 Spr. arr. - May 19 Sq. C. NWR - rare  
 Fall dep. - Sept. 6  
 Egg dates - May 18 to May 31  
 Bent - nests near the ground in bushes and thick grassy areas.
269. Dickcissel, Spiza americana, breeds throughout.  
 Spr. arr. - May 10 Union Co. - common summer  
 Fall dep. - Oct. 1 resident  
 Egg dates - May 17 - Aug. 5 De Soto NWR - abundant  
 Sq. C. NWR - common  
 Bent - nests on the ground in meadows and pastures.  
 Sq. C. NWR 23/5 1  
 Sq. C. NWR 24/5 3  
 Sq. C. NWR 25/5 2
270. Evening Grosbeak, Hesperiphona vespertina, irregular winter residence.  
 Fall arr. - Oct. 29 Union Co. - uncommon winter  
 Spr. dep. - May 15 visitor  
 Sioux City Xmas 1  
 Vermillion, S.D. Several reported early May
271. Purple Finch, Carpodacus purpureus, winter resident throughout.  
 Spr. dep. - May 2 Union Co. - regular early  
 Fall arr. - Aug. 7 spring and late  
 Fall migrant  
 De Soto NWR - occasional  
 Sq. C. NWR - rare  
 Omaha Xmas 32  
 St. Joseph Xmas 2  
 Sioux City Xmas 3
272. Common Redpoll, Acanthis flammea, winter resident.  
 Spr. dep. - March 19 Union Co. - erratic winter visitor  
 Fall arr. - Oct. 4
273. Pine Siskin, Spinus pinus, winter resident, a few may breed.  
 Spr. arr. - March 25 Union Co. - tolerably common  
 Spr. dep. - May 24 winter visitor and  
 Fall arr. - Oct. 30 occasional summer  
 Fall dep. - Nov. 2 resident  
 Egg Dates - May 2 to July 15  
 Bent - almost colonial nesting in conifers or cedars  
 Omaha Xmas 3  
 St. Joseph Xmas 26  
 Sioux City Xmas 6

274. American Goldfinch, Spinus tristis, year-round resident.  
Egg Dates - July 5 to Sept. 17 Union Co. - tolerably common  
summer resident  
and winter visitor  
De Soto NWR - abundant  
Sq. C. NWR - common  
Bent - nests late, always close to thistle seed (food)  
usually near swamp, high in trees (willows).  
W 22/9 1  
Omaha Xmas 115  
St. Joseph Xmas 50  
Sioux City Xmas 18  
A 5/5 2  
Browns L., Ia. 15/5 3  
A 17/5 1  
Sq. C. NWR 23/5 1  
Sq. C. NWR 24/5 1  
Sq. C. NWR 25/5 1
275. Red Crossbill, Loxia curvirostra, sporadic winter resident.  
Fall arr. - Oct. 6 Union Co. - casual winter visitor  
Spr. dep. - May 2 Sq. C. NWR - abundant  
Sioux City Xmas 4
276. White-winged Crossbill, Loxia leucoptera, sporadic winter  
resident.  
Fall arr. - Nov. 10 Sq. C. NWR - abundant  
Spr. dep. - March 6
277. Rufous-Sided Towhee, Pipilo erythrophthalmus, year-round  
Spr. arr. - March 27 Union Co. - common summer  
Fall dep. - Oct. 18 resident  
Egg Dates - May 1-Aug. 11 De Soto NWR - abundant  
Sq. C. NWR - common  
Bent - thickets at edge of woods.  
Omaha Xmas 2  
St. Joseph Xmas 2  
A 5/5 1  
Browns L., Ia. 15/5 1
278. Lark Bunting, Calamospiza melanocorys  
Spr. arr. - May 3 Union Co. - an unusual spring  
Fall arr. - Aug. 12 or summer visitor  
Fall dep. - Oct. 15  
Egg Dates - July 20  
Bent - nests on the ground, in pastures along fence lines  
Bent - Known to breed in S.W. Minnesota irregularly.

279. Savannah Sparrow, Passerculus sandwichensis, breeds N., Spr.,  
 Fall migr. elsewhere  
 Spr. arr. - March 27 Union Co. - tolerably common  
 Fall dep. - Nov. 2 Spring & Fall  
 Egg Dates - May 6 to June 20 migrant  
 Sq. C. NWR - uncommon  
 Bent - nests on the ground in grassy vegetation and up-  
 land meadows
280. Grasshopper Sparrow, Ammodramus savannarum, breeds throughout  
 Spr. arr. - May 9 Union Co. - tolerably common  
 Fall dep. - Nov. 4 summer resident  
 Egg Dates - May 18 to July 10 De Soto NWR - uncommon  
 Sq. C. NWR - uncommon  
 Bent - nests in base of clumps of grass  
 A 5/5 1
281. Le Conte's Sparrow, Passerherbulus caudacutus, Spr., Fall migr.  
 Spr. arr. - April 11 Union Co. - uncommon migrant  
 Spr. dep. - April 21 Sq. C. NWR - occasional  
 Fall arr. - Sept. 25  
 Fall dep. - Oct. 5
282. Henslow's Sparrow, Passerherbulus henslowii, breeds throughout.  
 Spr. arr. - May 9 De Soto NWR - occasional  
 Fall dep. - Nov. 1 Sq. C. NWR - uncommon  
 Egg Dates - May 22 to July 7  
 Bent - nests in weedy prairies and meadows with dense cover
283. Sharptailed Sparrow, Ammospiza caudacuta, Spr., Fall migr.  
 Spr. arr. - April 29  
 Spr. dep. - May 15  
 Fall arr. - Sept. 21  
 Fall dep. - Oct. 20
284. Vesper Sparrow, Poocetes gramineus, breeds throughout.  
 Spr. arr. - April 25 Union Co. - tolerably common  
 Spr. dep. - April 2 migrant and  
 Fall arr. - Oct. 2 probable breeder  
 Fall dep. - Oct. 15  
 Bent - nests in old, weedy fields.
285. Lark Sparrow, Chondestes grammacus, breeds throughout  
 Spr. arr. - May 1 Union Co. - uncommon summer  
 Fall dep. - Aug. 16 resident  
 Egg Dates - May 5 to July 4 De Soto NWR - uncommon  
 Sq. C. NWR - occasional  
 Bent - nest in meadows or low shrubs (red cedar).  
 A 5/5 2  
 A 17/5 2

286. Slatecolored Junco, Junco hyemalis, winter resident throughout  
 Fall arr. - Sept. 24 Union Co. - common Spr., Fall  
 Spr. dep. - April 22 migr. and regular  
 winter visitor  
 De Soto NWR - common  
 Sq. C. NWR - common  
 Omaha Xmas 794  
 St. Joseph Xmas 315  
 Sioux City Xmas 302  
 Yankton, S.D. Xmas 4  
 A 5/4 3
287. Tree Sparrow, Spizella arborea, winter resident throughout  
 Spr. dep. - Apr. 23 Union Co. - very common Spr.  
 Fall arr. - Oct. 15 and Fall migr. and  
 winter visitor  
 De Soto NWR - common  
 Sq. C. NWR - common  
 Omaha Xmas 862  
 St. Joseph Xmas 372  
 Yankton, S.D. Xmas 205  
 Sioux City Xmas 577
288. Chipping Sparrow, Spizella passerina, breeds throughout  
 Spr. arr. - May 12 Union Co. - regular summer  
 Fall dep. - Oct. 10 resident  
 Egg Dates - May 1 to Aug. 20 Sq. C. NWR - uncommon  
 Vermillion Many in early May
289. Clay-colored Sparrow, Spizella pallida, breeds throughout  
 Spr. arr. - Apr. 30 Union Co. - tolerably common  
 Fall dep. - Oct. 17 migrant  
 Egg Dates - May 22 to June 13 Sq. C. NWR - occasional  
 Bent - Breeds on shrubby hillsides, swamps, and poplar-  
 willow bluffs.
290. Field Sparrow, Spizella pusilla, breeds throughout  
 Spr. arr. - April 10 Union Co. - tolerably common  
 Fall dep. - Oct. 17 summer resident  
 Egg Dates - May 12 to July 30 De Soto NWR - abundant  
 Sq. C. NWR - common  
 Bent - nests low on small bushes of deciduous underbrush.  
 St. Joseph Xmas 4  
 A 5/5 1  
 A 17/5 1
291. Harris' Sparrow, Zonotrichia querula, Spr., Fall migr.  
 Spr. arr. - March 29 Union Co. - common migrant and  
 Spr. dep. - May 15 occasional winter  
 Fall arr. - Oct. 8 visitor  
 Fall dep. - Nov. 11 De Soto NWR - common  
 Sq. C. NWR - uncommon



- |            |          |
|------------|----------|
| Omaha      | Xmas 21  |
| St. Joseph | Xmas 44  |
| Sioux City | Xmas 32  |
|            | A 5/5 2  |
|            | A 17/5 1 |
292. White-crowned Sparrow, Zonotrichia leucophrys, Spr., Fall migr.  
 Spr. arr. - May 5                      Union Co. - regular Spr.,  
 Spr. dep. - May 19                      Fall migrant  
 Fall arr. - Oct. 15                    De Soto NWR - uncommon  
 Fall dep. - Oct. 30                    Sq. C. NWR - common  
     St. Joseph                          Xmas 2  
     Sioux City                          Xmas 1
293. White-throated Sparrow, Zonotrichia albicollis, Spr., Fall migr.  
 Spr. arr. - April 26                    Union Co. - almost common Spr.,  
 Spr. dep. - May 27                      Fall migrant  
 Fall arr. - Sept. 30                    De Soto NWR - uncommon  
 Fall dep. - Oct. 25                    Sq. C. NWR - common  
     Omaha                                Xmas 2  
     St. Joseph                            Xmas 5  
     A 18/5 1
294. Fox Sparrow, Passerella iliaca, Spr. Fall migr. in N., winter  
 resident in S.  
 Spr. arr. - March 22                    Union Co. - uncommon Spr.,  
 Spr. dep. - April 24                      Fall migrant  
 Fall arr. - Sept. 24                    De Soto NWR - occasional  
 Fall dep. - Nov. 5                      Sq. C. NWR - uncommon  
     G 18/10 1  
     Omaha                                Xmas 1
295. Lincoln's Sparrow, Melospiza lincolni, Spr., Fall migr.  
 Spr. arr. - April 12                    Union Co. - tolerably common  
 Spr. dep. - May 20                      Spr., Fall migrant  
 Fall arr. - Aug. 31                    Sq. C. NWR - occasional  
 Fall dep. - Nov. 4  
     Omaha                                Xmas 6
296. Swamp Sparrow, Melospiza georgiana, year-round resident throughout.  
 Spr. arr. - May 1                      Union Co. - irregular migrant,  
 Fall dep. - Oct. 26                      almost common some  
 Egg Dates - May 18 to June 17                    years, and an un-  
    common summer resident  
     Sq. C. NWR - uncommon  
     Bent - nests in swamps on marsh grasses, sedges and cattails.  
     Omaha                                Xmas 1  
     St. Joseph                            Xmas 4

297. Song Sparrow, Melospiza melodia, year-round resident  
 Spr. arr. - March 25 Union Co. - common migrant  
 Fall dep. - Oct. 12 not know to breed  
 Egg Dates - April 22 to Aug. 7 De Soto NWR - common  
 Sq. C. NWR - common  
 Bent - Breeds in wetlands, cattail swamps, the banks of  
 streams, wet meadows. Half the nests on the  
 sedges and half on the ground.  
 Omaha Xmas 72  
 St. Joseph Xmas 28  
 Sioux City Xmas 5  
 Browns L., Ia. 15/5 1  
 Sq. C. NWR 25/5 1
298. Lapland Longspur, Calcarius lapponicus, winter resident  
 throughout  
 Spr. dep. - April 4 Union Co. - erratic winter visitor  
 Fall arr. - Oct. 26  
 St. Joseph Xmas 40
299. Smith's Longspur, Calcarius pictus, uncommon winter resident  
 Spr. dep. - May 6  
 Fall arr. - Mid Nov.
300. Chestnut-collared Longspur, Calcarius ornatus, Spr., Fall migr.  
 Spr. arr. - Apr. 30  
 Fall arr. - Nov. 11  
 Fall dep. - Oct. 12
301. Snow Bunting, Plectrophenax nivalis, winter resident throughout  
 Spr. dep. - March 18 Union Co. - uncommon winter  
 Fall arr. - Oct. 9 visitor  
 De Soto NWR - rare  
 Yankton, S.D. Xmas 1

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Part B - Census of Breeding Birds in the Floodplain Plant  
Communities from Yankton, South Dakota to Rulo,  
Nebraska.

EXPLANATION OF TABLES

At each of the floodplain plant community study sites chosen by the plant section of the Missouri River Environmental Inventory a careful census was taken during the breeding season of all birds and nests in a measured area.

Since the plant survey describes the makeup of these communities precisely and the extensiveness of each community in the study area, knowing the density of breeding birds in these sites might allow an estimate of the total number of birds in the overall study area.

Birds were identified by sight and sound, and were attracted to the observer by an owl decoy and by playing recorded owl calls on a loudspeaker. With marsh birds the calls of each species presumed to be in the marsh were played back several times near sunset-an answering call proved the birds present.

Nests were identified as to species by the "anxious" parents nearby or by using a nest key field guide.

A list of selected reference on the relationship of birds nesting to vegetation is appended.

TABLE 1

## WOODED SITES

1A

YANKTON AREA  
Cedar Co., Nebr.  
SPECIES

40,000 M<sup>2</sup>

21 June, 1973

NUMBER SEENM<sup>2</sup> PER BIRD

Bobwhite	2	20,000
Mourning Dove	4	10,000
Chimney Swift	5	8,000
Flicker	2	20,000
Eastern Kingbird	2	20,000
Least Flycatcher	1	40,000
Blue Jay	4	10,000
Black-capped chickadee	3	13,000
Housewren	3	13,000
Catbird	3	13,000
Brown Thrasher	1	40,000
Robin	4	10,000
Warbling Vireo	1	40,000
Yellow Warbler	2	20,000
Yellow Throat	2	20,000
Baltimore Oriole	3	13,000
Common Grackle	3	13,000
Rose-breasted grosbeak	2	20,000
Indigo Bunting	2	20,000
American Goldfinch	1	40,000

1B

HILINE  
Clay Co., S.D.

20,000 M<sup>2</sup>

20 June, 1973

Mourning Dove	4	5,000
Yellow-billed Cuckoo	1	20,000
Yellow-shafted Flicker	1	20,000
Red-bellied Woodpecker	1	20,000
Tree Swallow	2	10,000
Blue Jay	4	5,000
Black-capped Chickadee	2	10,000
House Wren	5	4,000
Brown Thrasher	4	5,000
Robin	4	5,000
Wood Thrush	4	5,000
Baltimore Oriole	2	10,000
Rose-breasted Grosbeak	2	10,000
American Goldfinch	3	6,600

Bluejay nest

Brown thrasher nest with one egg and 2 young

Wood thrush nest with one egg



1C

SNYDER BEND

3600 M<sup>2</sup>

5 July, 1973

Woodbury Co., Iowa

Mourning Dove	11	327
Yellow-shafted flicker	1	3600
Eastern Kingbird	3	1200
Blue Jay	11	327
Black-capped chickadee	3	1200
House Wren	6	600
Robin	8	450
Yellow Warbler	4	900
Yellowthroat	5	720
Baltimore Oriole	2	1800
Common Grackle	20	180

Mourning dove nests 1) with one egg

2) no egg but occupied

1D

LEWIS & CLARK  
State Park, Iowa

N. DRIVE - 1500 M<sup>2</sup>

29, June, 1973

Mourning Dove	5	300
Blue Jay	4	375
House Wren	2	750
Robin	6	250
Warbling Vireo	1	1500
Yellow Warbler	1	1500
Yellowthroat	1	1500
Orchard Oriole	1	1500
Baltimore Oriole	1	1500
Common Grackle	23	65
Rose-breasted grosbeak	1	1500

1 Robin's nest

1 Dove's nest (occupied)

1 House sparrow nest

1E

LEWIS & CLARK  
State Park, IowaS. DRIVE - 1700 M<sup>2</sup>

29 June, 1973

Bobwhite	1	1700
Mourning Dove	8	212
Yellow-shafted Flicker	1	1700
Red-headed woodpecker	1	1700
Western Kingbird	1	1700
Blue Jay	4	425
Black-capped chickadee	1	1700
House Wren	4	425
Robin	9	188
Baltimore Oriole	2	850
Common Grackle	5	340
Rose-breasted Grosbeak	2	850

TABLE 2  
MARSHES

2A	<u>Yankton</u> - (Typha)	3000 M <sup>2</sup>	2 July, 1973
	Piedbilled Grebe	2	1500
	American Bittern	1	3000
	Mallard	2	1500
	Blue-winged Teal	2	1500
	Sora	1	3000
	Yellow-headed blackbird	2	1500
	Red-winged blackbird	6	500

2B	<u>Snyder Bend</u> - (Typha)	300 M <sup>2</sup>	5 July, 1973
	Blue-winged teal	2	1500
	Long-billed marsh wren	1	3000
	Red-winged blackbird	22	130

2C	<u>De Soto Bend</u> - (Typha)		28 June, 1973
----	-------------------------------	--	---------------

This marsh has dried up. No birds were seen breeding or feeding, although the Typha was still alive.

	Squaw Creek - (Nelumbo)	2800 M <sup>2</sup>	26 June, 1973
	Yellow-headed blackbirds	2	1400
	Red-winged Blackbird	3	930

(The above birds seemed only to be feeding in the Nelumbo lutea; they were transient and did not return or defend territory.)

2D Squaw Creek (Saggitaria)

26 June, 1973

No birds were seen feeding or breeding in this area. The refuge manager states that Saggitaria latifolia grows above the surface of the water too late to be used as a nesting area.

2E Squaw Creek (Typha)2100 M<sup>2</sup>

26 June, 1973

Pied-billed grebe	1	2100
Green Heron	1	2100
Blue-winged Teal	1	2100
King Rail	1	2100
Yellow-headed blackbird	1	2100
Red-winged blackbird	8	260

1 Pied-billed Grebe's nest

1 fledgling red-winged blackbird

1 red-winged blackbird's nest with 3 fledglings in juvenal plumage and one egg.

2F Squaw Creek (Nelumbo)2800 M<sup>2</sup>

26 June, 1973

Yellow-headed Blackbird	2	1400
Red-winged Blackbird	3	930

(The above birds seemed only to be feeding in the Nelumbo lutea; they were transient and did not return or defend territory.)

1F

## WILSON ISLAND

3200 M<sup>2</sup>

28 June, 1973

So. of Desoto N.W.R., Iowa

Bobwhite	2	1600 M <sup>2</sup> /bird
Mourning Dove	6	533
Yellow-billed Cuckoo	1	3200
Yellow-shafted Woodpecker	1	3200
Red-headed Woodpecker	1	3200
Hairy Woodpecker	1	3200
Eastern Kingbird	1	3200
Eastern Wood Peewee	1	3200
Blue Jay	1	3200
Black-capped Chickadee	2	1600
House Wren	1	3200
Catbird	2	1600
Brown Thrasher	1	3200
Robin	3	1060
American Redstart	7	460
Baltimore Oriole	1	3200
Common Grackle	4	800
Brown-headed Cowbird	4	800
Rose-breasted Grosbeak	2	1600
American Goldfinch	1	3200
Rufous-sided Towhee	2	1600
Song Sparrow	1	3200

Yellow-shafted Flicker's nest (occupied).

Catbird nest (occupied).

1G

## PLATTSMOUTH

N.W. Ref., Cass Co. Nebr.

5200 M<sup>2</sup>

27 June, 1973

Yellow-billed Cuckoo	1	5200 M <sup>2</sup> / bird
Red-headed Woodpecker	1	5200
Hairy Woodpecker	1	5200
Eastern Kingbird	1	5200
Bank Swallow	4	1300
Black-capped Chickadee	4	1300
House Wren	2	2600
Catbird	4	1300
Robin	4	1300
Yellow Warbler	1	5200
American Redstart	1	5200
Red-winged Blackbird	1	5200
Orchard Oriole	2	2600
Baltimore Oriole	5	1040
American Goldfinch	1	5200
Song Sparrow	1	5200

1 Catbird's nest (occupied)

1H

NEBRASKA CITY, NEB.	2550 M <sup>2</sup>	27 June, 1973
Wood Duck	1	2550 M <sup>2</sup> /bird
Bobwhite	1	2550
Mourning Dove	10	255
Yellow-shafted Flicker	1	2550
Eastern Kingbird	3	850
House Wren	1	2550
Catbird	4	640
Brown Thrasher	1	2550
Robin	3	850
Red-winged Blackbird	5	510
Orchard Oriole	3	850
Common Grackle	10	255
Brown-headed Cowbird	1	2550
Cardinal	1	2550
Rose-breasted Grosbeak	1	2550
Indigo Bunting	2	1275
American Goldfinch	1	2550



11

BROWNVILLE, IOWA	6000 M <sup>2</sup>	27 June, 1973
Turkey Vulture	1	6000 M <sup>2</sup> /bird
Yellow-shafted Flicker	4	1500
Red-headed Woodpecker	2	3000
Cliff Swallow	20	300
Blue Jay	2	3000
Black-capped Chickadee	4	1500
Tufted Titmouse	1	6000
House Wren	1	6000
Catbird	1	6000
Robin	2	3000
Yellow Warbler	2	3000
Yellowthroat	1	6000
House Sparrow	8	750
Blatimore Oriole	4	1500
Common Grackle	11	545
Brown-headed Cowbird	2	3000
Rose-breasted Grosbeak	1	6000
Indigo Bunting	1	6000

25 Cliff Swallows nests (half occupied)

(House Sparrow has taken over several nests)

1 Robin's nest

1J

SQUAW CREEK N.W.R.  
Holt Co, Md.

3000 M<sup>2</sup>

27 June, 1973

Ring-necked Pheasant	1	3000 M <sup>2</sup> /bird
Yellow-billed Cuckoo	3	1000
Red-bellied Woodpecker	2	1500
Red-headed Woodpecker	1	3000
Hairy Woodpecker	3	1000
Downy Woodpecker	1	3000
Eastern Wood Peewee	1	3000
Blue Jay	1	3000
Black-capped Chickadee	1	3000
House Wren	1	3000
Bell's Virco	1	3000
Yellow Warbler	2	1500
Myrtle Warbler	1	3000
Yellowthroat	3	1000
Yellow-breasted Chat	1	3000
Orchard Oriole	8	375
Baltimore Oriole	2	1500
Common Grackle	14	210
Brown-headed Cowbird	2	1500
Cardinal	2	1500
Indigo Bunting	2	1500
American Goldfinch	1	3000

1 Common Grackle's nest

## SELECTED REFERENCES ON THE RELATIONSHIP OF BIRDS' NESTING TO VEGETATION

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THE FALL MIGRATION OF ANSERIFORMES AND CHARADRIIFORMES  
DOWN THE MISSOURI RIVER 1972

EXPLANATION OF TABLES AND FIGURES

The migration of waterfowl and shorebirds along the Missouri River Corridor of the Mississippi Flyway is one of the most important ornithological occurrences in the study area. This event is shown here (Tables 1-42) first by total numbers of birds seen per week for the Fall of 1972 at Lake Andes NWR, S.D., Vermillion, S.D., DeSoto NWR, Iowa, and Squaw Creek NWR, Missouri. The numbers given for the refuges are from their unpublished weekly bird counts. Numbers labeled "F.L., S.C." were collected for me by Mr. Frank Lawhon at Squaw Creek. "F.L., Br.L." indicates sightings made at Brown's Lake, Missouri, which is close to Squaw Creek NWR. Observations at Vermillion were made by the author.

Figures 1 and 2 show an overall view of the migration down the Missouri River. To observe only significant movements, numerical weekly data was converted into a percentage score of the maximum number of a species seen in a study site during the four month study period. The maximum number was then converted to 100%. A change of 30% from one week to another was considered an arrival or departure.

Each box represents a site-week, that is, the arrivals and departures which occurred at a particular site on a particular week. A species name in the top of the box indicates an arrival of that species at that site during that week. A species name in the bottom of a box indicates a departure from that site during that week.

A line connecting an arrival of a species in one box with a departure of the same species in a box immediately to the right is used to emphasize the fact that this species had a departure in the first week following an arrival.

The large letters between boxes stand for weather conditions which are possible causes for departure. They show the weather conditions which were present at some time during the week between the bird counts whose results are shown on either side of the large letters.

<u>Symbol</u>	<u>Weather Condition</u>
H	Low pressure cell replaced by high with NW wind (established by weather map)
F	Passage of a cold front
C	A cold wave (monthly minimum temperature)
W	Greater than 17 mph winds, NW
S	At least 2 inches of snow cover on the ground

A subscript by the symbol indicates that the condition occurred that many times during the week. No subscript means that the condition occurred once during the week.

This material was also used in the thesis by James Lynk.  
(The Fall Migration of Anseriformes and Charadriiformes of the Missouri River, M.A. Thesis, University of South Dakota, 1973.)

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WHISTLING SWAN TABLE I

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR									0	6	4	1	1	0			
								-	1	0							

\*\*\*\*

CANADA GOOSE TABLE II

CANADA GOOSE INDEX																	
LAKE ANDES NWR																	
					60	50	0	10	-	114	-	13	-	6500	5000	700	
VERMILLION AREA																	
			1	60	0	1	0	6	0	0	0	3	0				
DE SOTO BEND NWR																	
			0	25	50	65	125	200	100	30	200	300	25	0	1	2	
SQUAW CREEK NWR																	
		0	35	0	1800	8615	6625	-	4360	-	4950	4750	-		0		

\*\*\*\* WHITE-FRONTED GOOSE TABLE III

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR					0	500	0	0	110	0							
VERMILLION AREA																	
DE SOTO BEND NWR										0	3	0					
SQUAW CREEK NWR								0	0	125	-	0	200	-	0		

\*\*\*\* SNOW GOOSE TABLE IV

LAKE ANDES NWR																	
VERMILLION AREA			0	14	0	20	6	0	0	690	50	0	35	0			
DE SOTO BEND NWR			0	17	1000	19000	145000	19500	23000	27000	52000	98000	12000	9000	1000	1500	20
SQUAW CREEK NWR		0	12	110	-	40855	151460	173760	-	52250	-	8550	32600	-	27	600	-

\*\*\*\* MALLARD

TABLE V

	September			October				November				December					
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR	1750	2250	5090	5050	5370	11480	46500	93600	201390	—	117000	151865	45925	40000	40000	50000	8000
VERMILLION AREA	20	0	1	0	0	4	1	59	30	48	0	0	14	0			
DE SOTO BEND NWR	30	30	35	40	825	1700	10000	22725	34775	49800	25000	122500	52000	35000	20000	25000	3500
SQUAW CREEK NWR			678		46000			101700	101700	130500			122000				
peak																	
mo. avg.	272																
F.L., S.C.	20	20	15	150	0	—	—	0	60000	20000	—	50000	30500	31000	—	—	—
" , Br.L.					0	—	0	0	0	0	18	10	4				

\*\*\*\* BLACK DUCK

TABLE VI

LAKE ANDES NWR																	
VERMILLION AREA							1										
DE SOTO BEND NWR						3	2	2	2	2	—	23	0	2	—		
SQUAW CREEK NWR																	
peak																	
mo. avg.																	
F.L., S.C.	0																
" , Br.L.																	



\*\*\*\*\*  
GADWALL

TABLE VII

	September			October				November				December					
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR				1300	500	1020	2580	860	150	-	50	0	3	0	0	0	
600			1130														
VERMILLION AREA						4	50	0	0	63							
DE SOTO BEND NWR				0	2	15	25	35	20	100	50	125	15				
SQUAW CREEK NWR				65	750		3350		4500				700				
40					0				1817				175				
mo. avg.			0	400	0	-	0	-	500	10	-	1	-	1	-	-	
F.L., S.C.			0	-	5	5	0	50	1	0	8	10	4	-	-	-	
" " Br.L.			-	-	-	-	-	-	-	-	-	-	-	-	-	-	

\*\*\*\*\*  
BALDPATE

## TABLE VIII

	0	2400	2510	4630	6300	2680	1690	2840	60	-	30	50	22	0	-	-	-
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR																	
peak																	
mo. avg.	38				1250		4650		2100		3500		0				
F.L., S.C.	0	0	0	0	155	-	-	-	90	50	-	0	-	1	-	-	-
" , Br.L.	0	-	-	-	1	0	0	0	0	0	0	0	0	-	-	-	-

\*\*\*\* PINTAIL

TABLE IX

	September			October				November				December					
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR			50	430	40		80	580	80	50		0	1				
1000		0															
VERMILLION AREA				0	0		0	100	0								
0		0	66														
DE SOTO BEND NWR			0	3	20		0	5	0	0		1	0	0	0	1	1
0		0															
SQUAW CREEK NWR				13560	12200		41875		6000								
peak									5566								
mo. avg. 6500				100	0		-	-	1500	750	-	1500	200	50	50	-	-
F.L., S.C. 60		1250	350														
" , Br.L.																	

\*\*\*\* GREEN WINGED TEAL

TABLE X

	LAKE ANDES NWR																			
						</														

\*\*\*\* BLUE WINGED TEAL

TABLE XI

	September			October			November			December		
	8	15	22	29	6	13	20	27	3	10	17	24
LAKE ANDES NWR												
6100		6130	2300	3930	230	590	30	0	0	0	0	0
VERMILLION AREA												
79		120	14	0	0	5	0	0	69	0		
DE SOTO BEND NWR												
75		150	250	100	75	25	10	0				
SQUAW CREEK NWR												
peak												
mo. avg. 1200					4550	-	7550	-	152	155	0	0
F.L., S.C. 15		300	220	8	0	0	0	0	2	0	0	0
" , Br.L. 0		-	-	-	0	0	1	0	0	0	0	0

\*\*\*\* SHOVELER

TABLE XII

	September			October			November			December		
	8	15	22	29	6	13	20	27	3	10	17	24
LAKE ANDES NWR												
1280		900	1430	1780	60	260	390	820	550	0		
VERMILLION AREA												
18		30	0	0	0	12	3	0				
DE SOTO BEND NWR												
SQUAW CREEK NWR												
peak												
mo. avg. 30					850	-	3000	-	275	25	110	750
F.L., S.C. 3		60	0	0	10	0	0	0	135	4	0	4
" , Br.L. 0		-	-	-	0	0	0	0	5	0	0	0
									1000	1	0	1
									250	1	0	1
									27	0	0	0

\*\*\*\* WOOD DUCK

TABLE XIII

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR							0	10	10	0							
VERMILLION AREA				0	0	0	1	0									
DE SOTO BEND NWR			80	75	40	50	30	25	100	20							
SQUAW CREEK NWR			22	0	37	-	-	55	10	0	22	0	0	1	-		
peak		14															
mo. avg.		2	4	0	0												
F.L., S.C.																	
" , Br.L.																	

\*\*\*\* REDHEAD

TABLE XIV

LAKE ANDES NWR	1440	710	0	0	230	610	780	750	210	-	20	0					
VERMILLION AREA		0	8	0	0	0	3	0									
DE SOTO BEND NWR								1	2	0	35	3					
SQUAW CREEK NWR								85			14						
peak					18				7	17	-	0	0	0	0	-	-
mo. avg.		0	0	0	1	-	-	-	9	1	1	0	0	-	-	-	-
F.L., S.C.		0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
" , Br.L.		0	-	-	0	0	0	0	1	1	1	0	0	0	0	0	0

\*\*\*\* RING-NECKED DUCK

TABLE XV

	September			October				November				December					
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR						80		0	100	230	0						
VERMILLION AREA							1	0	12								
DE SOTO BEND NWR				0	15	15	10	27	25	0	10	0					
SQUAW CREEK NWR				85	5					5							
peak					10					50		5		0			
mo. avg.			0							0				0			
3.L., S.C.			0	0	0					12				0			
" , Br.L.			0	-	0					0				0			

\*\*\*\* CANVASBACK

TABLE XVI

LAKE ANDES NWR																	
				0	50	80	310	560	390	-	56	9	2	0			
VERMILLION AREA																	
					0	26	6	0									
DE SOTO BEND NWR																	
							0	1	1	1	11	5	0				
SQUAW CREEK NWR																	
peak					8			30	4								
mo. avg.			0						4								
P.L., S.C.			0		0				4					0			
" , Br.L.			0	-	0	-	0	-	5	0	-	1	2	-	0	-	-

## TABLE XVII

\*\*\* COMMON GOLDENEYE \*\*\*

## TABLE XVIII

[illegible]

\*\*\*\* BUFFLEHEAD

TABLE XIX

	September			October				November				December					
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR					0	60	130	110	460	-	475	119	26	0			
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR																	
peak																	
mo. avg.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P.L., S.C.	0	0	0	0	0	0	0	0	0	4	-	30	-	0	-	-	-
" , Br.L.	0	0	0	-	0	0	0	-	0	0	8	6	3	-	-	-	-

\*\*\*\* RUDDY DUCK

TABLE XX

LAKE ANDES NWR																	
3470	2330	7170	13150	12040	22400	7100	6170	7920	1610	333	50	0					
VERMILLION AREA																	
								0	100	0							
DE SOTO BEND NWR																	
			0	1	0	24	0	7	7	80	12	0	0	2		1	
SQUAW CREEK NWR																	
peak							400	400									
mo. avg.	0			40				205									
P.L., S.C.	0	0	0	23	-	-	-	400	225	-	1000	-	3	-			
" , Br.L.	0	-	-	0	0	9	1	4	1	34	8	3	-	-			

\*\*\*\* HOODED MERGANSER

TABLE XXI

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR								0	7	0	2	3	3	0	0	1	1
SQUAW CREEK NWR																	
peak																	
mo. avg.																	
F.L., S.C.				0					0	3	2	100	-	0	14	-	-
" , Br.L.				-				-	0	0	0	2	2	0	-		

\*\*\*\* COMMON MERGANSER

TABLE XXII

	LAKE ANDES NWR																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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\*\*\*\* GREATER YELLOWLEGS

TABLE XXV

	September			October			November			December		
	8	15	22	29	6	13	20	27	3	10	17	24
LAKE ANDES NWR												
VERMILLION AREA	2	0	0	0	0	0	0	5	1	0		
DE SOTO BEND NWR												
SQUAW CREEK NWR												
peak		1 (first)	3 (peak)									
F.L., S.C. 12		18	2	0	0	0	0	0	7	4	1	0
" , Br.L.												

\*\*\*\* LESSER YELLOWLEGS

TABLE XXVI

	Peak for first Quarter 300 in Sept.			None second Quarter								
	24	0	0	0	30	0	2 (peak for second quarter)			6	4 (last)	0
LAKE ANDES NWR												
VERMILLION AREA												
DE SOTO BEND NWR												
SQUAW CREEK NWR												
peak		90 (first)	100 (peak)									
F.L., S.C. 25		600	0	0	0	0	16	0	0	6	4 (last)	0
" , Br.L.												

\*\*\*\* PECTORAL SANDPIPER

TABLE XXVII

September		October				November				December						
8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																
VERMILLION AREA																
11	5	0	0	0	14	10	0									
DE SOTO BEND NWR																
SQUAW CREEK NWR																
peak	12 (first)	100 (peak)														
F.L., S.C.	6	50	1	0	0				3	-	2	-	0	-		
" , Br.L.																

\*\*\*\*

LAKE ANDES NWR

VERMILLION AREA

DE SOTO BEND NWR

SQUAW CREEK NWR

peak  
mo. avg.  
F.L., S.C.  
" , Br.L.



\*\*\*\* UPLAND FLOVER

TABLE XXX

	September		October		November		December	
	8	15	22	29	6	13	20	27
LAKE ANDES NWR								
VERMILLION AREA								
DE SOTO BEND NWR								
SQUAW CREEK NWR								
peak								
mo. avg.								
F.L., S.C.								
" , Br.L.								

\*\*\*\* SOLITARY SANDPIPER

TABLE XXXI

	September		October		November		December	
	8	15	22	29	6	13	20	27
LAKE ANDES NWR								
VERMILLION AREA								
DE SOTO BEND NWR								
SQUAW CREEK NWR								
peak								
mo. avg.								
F.L., S.C.								
" , Br.L.								

\*\*\*\* SPOTTED SANDPIPER

TABLE XXII

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA																	
DE SOTO BEND NWR																	
SQUAW CREEK NWR																	
peak																	
mo. avg.																	
F.L., S.C.																	
" , Br.L.																	

\*\*\*\* BAIRD'S SANDPIPER

TABLE XXXIII

LAKE ANDES NWR																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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20 (peak for second quarter of fiscal year)

\*\*\*  
LEAST SANDPIPER

TABLE XXXIV

	September	October	November	December
	8	29	3	8
	15	6	27	15
	22	13	20	22
LAKE ANDES NWR				
VERMILLION AREA				
5				
DE SOTO BEND NWR				
SQUAW CREEK NWR				
5 (first)		15	15 (last)	
5				
F.L., S.C.				
" " Br.L.				

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LAKE ANDES NWR

TABLE XXXV

	Lake Andes NWR																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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\*\*\*\* SHORT BILLED DOWITCHER

TABLE XXXVI

	September			October			November			December							
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
LAKE ANDES NWR																	
VERMILLION AREA					1												
DE SOTO BEND NWR																	
SQUAW CREEK NWR								60					10 (last)				
peak																	
mo. avg.																	
F.L., S.C.																	
" , Br.L.																	

\*\*\*\* LONG BILLED DOWITCHER

TABLE XXXVII

LAKE ANDES NWR	peak for first quarter 700 in Sept.	VERMILLION AREA	DE SOTO BEND NWR	SQUAW CREEK NWR	peak mo. avg. F.L., S.C. " , Br.L.



\*\*\*\*\*STILT SANDPIPER

TABLE XXXVIII

	September	October	November	December
	8 15 22	29 6 13 20	27 3 10 17	24 1 8 15 22 29
LAKE ANDES NWR				
VERMILLION AREA				
DE SOTO BEND NWR				
SQUAW CREEK NWR				
peak	18	(first & peak)	8 (last)	
mo. avg.				
F.L., S.C.	26	0	0	-
" , Br.L.	200	0	0	0

\*\*\* HUDSONIAN GODWIT

TABLE XXXIX

[illegible]



AD-A129 229

MISSOURI RIVER ENVIRONMENTAL INVENTORY VERTEBRATE

SECTION: BIRDS BIRDS AL..(U) SOUTH DAKOTA UNIV

VERMILLION DEPT OF BIOLOGY J LYNK 1973

UNCLASSIFIED

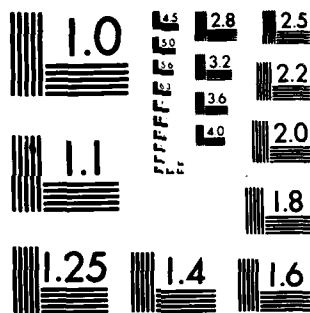
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F/G 6/3

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						END
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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

\*\*\*\* WILSON'S PHALAROPE

TABLE XLII

	September			October			November			December		
	8	15	22	29	6	13	20	27	3	10	17	24
LAKE ANDES NWR												
VERMILLION AREA				0	0	1	0					
DE SOTO BEND NWR												
SQUAW CREEK NWR												
peak												
mo. avg.												
? L., S.C.	12	0	0	0	0	-	-	-	-			
" , Br.L.												

\*\*\*\*

LAKE ANDES NWR												
VERMILLION AREA												
DE SOTO BEND NWR												
SQUAW CREEK NWR												
peak												
mo. avg.												
? L., S.C.												
" , Br.L.												

FIGURE 1

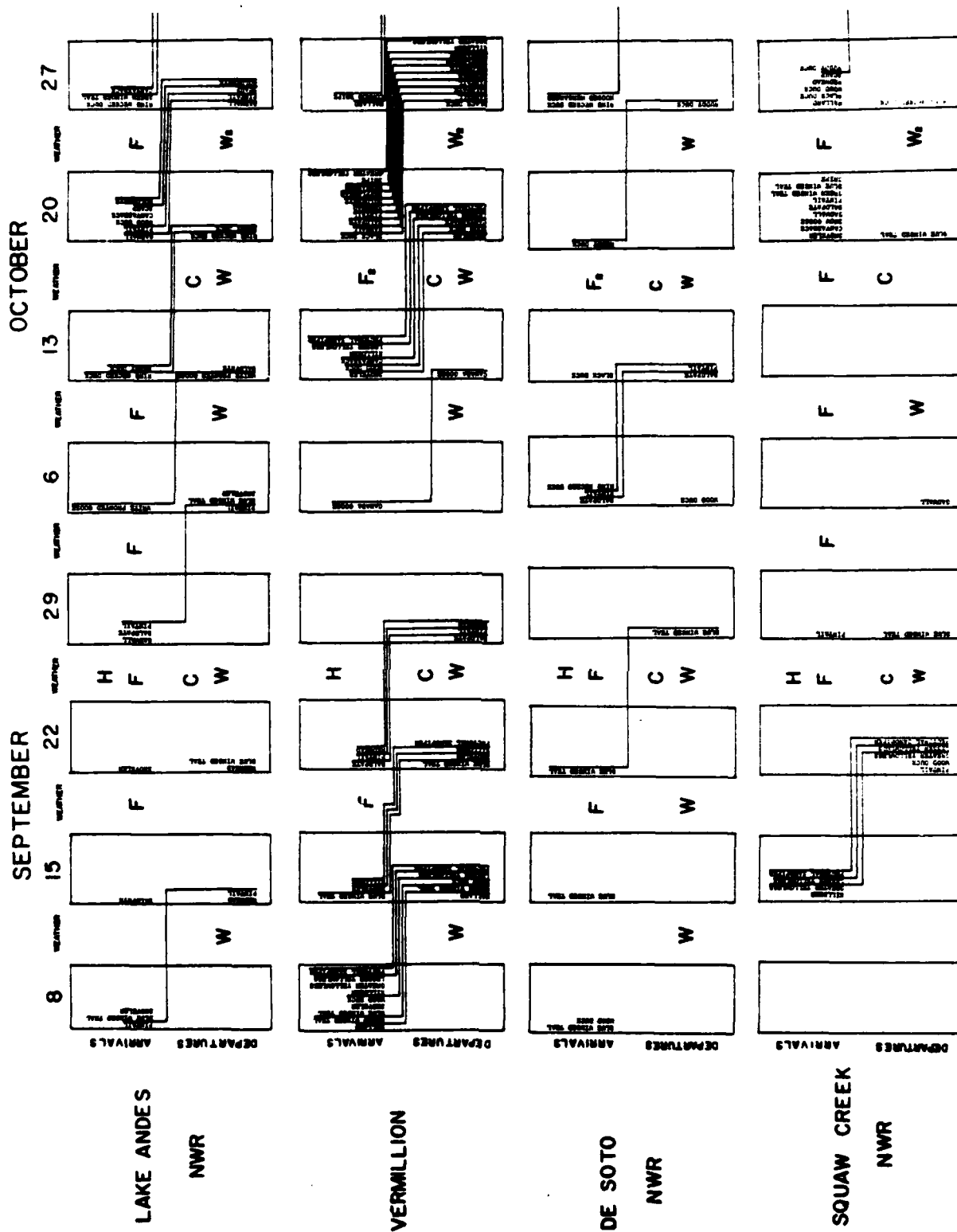


FIGURE 2

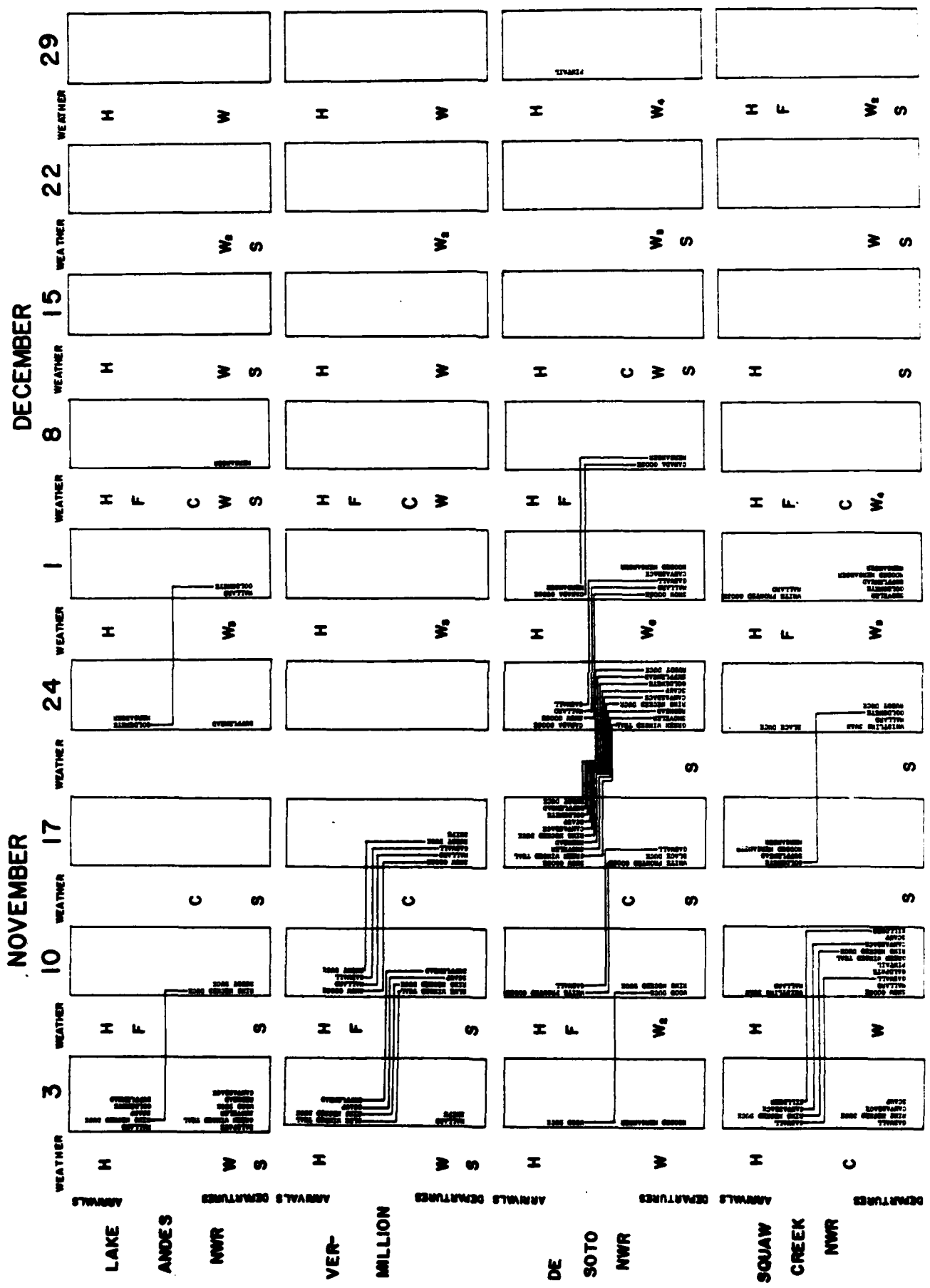


Figure 2.

Part D - General Conclusions: Potential Effects of  
Channelization on Birds in the Study Areas.

Since "bank stabilization reduces habitat diversity by increasing the physical stability of the substrate, thus preventing the formation of new habitats upon which young seral communities and their associated fauna depend for their existence" (Final Report of the Plant Section, M.R.E.I., p. 6), channelization must affect bird populations. Any bird which must have a seral community to breed will no longer breed in the study area (or will breed in greatly reduced numbers) after channelization. Marshes, sandbars, and poplar-willow communities have several local breeders now occupying them.

Marshes

Podicipedidae  
  Eared Grebe  
  Pied-billed Grebe  
Ardeidae  
  Least Bittern  
  American Bittern  
Anatidae  
  Mallard  
  Pintail  
  Green-winged Teal  
  Blue-winged Teal  
  Shoveler  
  Redhead  
Rallidae  
  King Rail  
  Virginia Rail  
  Sora Rail  
  American Coot  
Laridae  
  Black Tern  
Troglodytidae  
  Long-billed Marsh Wren  
Icteridae  
  Yellow-headed Blackbird  
  Red-winged Blackbird  
Fringillidae  
  Swamp Sparrow

Sandbars

Charadriidae  
  Piping Plover  
Laridae  
  Least Tern

Poplar-Willow Communities

Parulidae  
  Prothonotary Warbler  
Fringillidae  
  Clay-colored Sparrow



It is also possible that channelization makes the river less attractive to the Bald Eagles which now winter in the unchannelized upper section. These birds are feeding on fish probably caught in the shallows and along the sandbars. A fast moving, muddy river would make their fishing more difficult if not impossible. These conditions probably account for their limited utilization of the portion already channelized.

There is also a difference in the utilization of channelized and unchannelized rivers by wintering waterfowl. Bean ("Winter Waterfowl Ecology in Yankton, Clay and Union Counties", South Dakota, University of South Dakota Master's thesis, 1973) found approximately 40,000 anatids in the u, channelized portion of this study area whereas there were essentially none using the channelized portion. It would seem probable that channelization to Yankton would eliminate most of this wintering population.

END